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CURRICULUM ADAPTATION AS A STRATEGY FOR CURRICULUM DEVELOPMENT

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ABSTRACT

Curriculum adaptation is defined as the creation of curriculum/resource materials to meet 'new' educational needs by changing, in some way, materials that have already been developed for other purposes. As a strategy for curriculum development, it offers many advantages and merits serious consideration, particularly in relation to the curriculum development requirements and institutional conditions prevailing in the Further Education sector. The study reported in this thesis was therefore designed to determine the incidence of curriculum adaptation in Further Education and, importantly, to develop an understanding of the decision-making issues, activities and procedures to be associated with this type of work.

Literature searches revealed that little had been written about curriculum adaptation and thus indicated the need to identify, analyse and evaluate actual instances of adaptation work. However, in the absence of an appropriate model to define and guide an empirical investigation, a theoretical 'framework' suitable for this task, was developed. This was predicated on the assumption that curriculum adaptation is a rational activity involving a systematic approach to decision-making and action.

Information relating to the practice of curriculum adaptation in Further Education colleges was collected by questionnaire and structured interview techniques. The inquiry revealed a low incidence of the use of curriculum adaptation, despite the considerable amount of curriculum development work that was being staged. The investigation into the defining characteristics of adaptation was organized through the development of detailed case-study material. The analysis of this

material demonstrated that curriculum adaptation was being conducted in a largely pragmatic and intuitive manner, and that much of its potential was being overlooked. The study therefore offers recommendations and guidelines which aim to facilitate a more systematic and purposive approach to curriculum adaptation as a strategy for curriculum development.

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CHAPTER 1: ADAPTIVE CURRICULUM DEVELOPMENT

Section 1.0: Introduction

The term 'adaptive curriculum development' embraces the idea that curriculum innovation can be brought about by adapting or modifying in some way an 'existing' curriculum. More specifically, it envisages changes of various kinds being made to the teaching and/or learning materials associated with a course or programme that already exists, in order to meet 'new' educational needs. In this sense, adaptive curriculum development may be seen as a strategy for curriculum innovation which is clearly distinguishable from what may be called *ab initio* curriculum development in which teaching and learning materials are generated 'from scratch'. Thus adaptive curriculum development and *ab initio* curriculum development represent two separate yet related strategies for bringing about 'new' curriculum materials. (This point will be further elaborated in Chapter 2.)

The concept of *ab initio* development is a familiar one, even though the term '*ab initio* development' is not normally used. The curriculum movement of the 1960s and 1970s, which featured a large number of curriculum projects aimed at the school sector, chiefly employed *ab initio* development as the means whereby 'packages' of curriculum materials were generated. In this way, 'curriculum development' became almost synonymous with '*ab initio* development'. However, it has to be acknowledged that, once developed, curriculum materials may be used for alternative purposes i.e., to achieve educational intentions other than those which inspired the development of the 'original' materials, and that this may necessitate modifications to the existing form or content of materials. For this reason, it is clearly important to

recognize that adaptive curriculum development provides the curriculum innovator with another possible route for bringing about curriculum change.

Section 1.1: The legacy of the curriculum movement*

In order to trace the origins of adaptive curriculum development and to consider its potential as a curriculum development strategy, it is necessary to make some general points about the process of curriculum innovation and to relate these to the curriculum movement in the school sector in the 1960s and 1970s. In addition, a brief overview of the pressures exerted on the further education sector in the 1970s and 1980s is required in order to demonstrate the nature and extent of demands for curriculum change in that sector. This and the following section will therefore address these issues.

Curriculum innovation may be seen as a response to pressures, overt and covert, emanating from both inside and outside the educational system. Whilst it is often not possible to link a particular innovation to a single cause or pressure, attempts have been made to suggest major causes underlying curriculum innovation (Schools Council, 1973). These attempts demonstrate that the chief pressures responsible for innovation are not always educational in nature but are, quite frequently, political, economic, social or ideological. For instance, in the early 1960s there was a demand for more and better trained scientists and technologists, which resulted in the call for more effective and more up-to-date science education in schools.

* In this section, reference is made to a number of curriculum development projects, aimed at the school sector. Details of these projects are provided in Appendix A of this study.

This situation must be seen as the key factor in the establishment of the early science and mathematics projects, notably by the Nuffield Foundation. Shortly after, in 1964, the Schools Council was set up with the brief to develop new curricula and it too responded not only to the pressures arising from scientific and technological advance but also to a range of other pressures. These have been identified as resulting from wider social changes, from educational research, from changes associated with the organization of education or from the perception of new educational needs (Schools Council, 1973). As a consequence, the Council funded a very extensive range of curriculum projects both in 'traditional' school subjects and in 'new' study areas.

The early Nuffield projects which were designed for the more able pupil in science and which led to the award of 'O' level qualifications, produced highly structured 'packages' of materials which were linked to particular examinations. These materials were produced by central teams of 'experts' who identified certain educational objectives and 'translated' these into appropriate teaching and learning programmes, using what they considered to be the most suitable and effective methods. The 'packages' of material that were developed were then tried out, revised in the light of trials and made generally available to teachers in schools, with prescriptions or recommendations for their implementation.

This approach to curriculum development, termed by Havelock (1970; 1971) as the Research, Development and Diffusion model (RD and D) and also often referred to as a 'centre-periphery approach', was adopted by the Schools Council in some instances. It proved most successful and acceptable for work that aimed at national coverage in situations where formal agreement had been reached about curriculum

intentions and content, and about the educational standards to be achieved. This did not mean, however, that the centre-periphery approach was always concerned with national development - a number of regional projects, e.g., the North West Regional Curriculum Development Project and the Shropshire Mathematics Experiment also used this model (FEU, 1982).

During the late 1960s and into the 1970s, a wide range of new curriculum needs manifested themselves. Prominent among them was the requirement to provide meaningful educational experiences for those pupils affected by the raising of the school leaving age in 1972-1973 (referred to as ROSLA pupils) and for the 'new' (i.e., non-academic) sixth-former. These gave rise to projects that produced more flexible teaching and learning curriculum 'packages' which were not necessarily tied to a public examination and which afforded implementing teachers more freedom over how the materials might be used e.g., Humanities Curriculum Project, Geography for the Young School Leaver, and Design and Craft Education Project (FEU, 1982).

The 1970s witnessed an increasing tendency away from the centre-periphery approach towards more localized curriculum development. Concomitant with a changing pattern of pressures on the school curriculum came the realization that, despite the proven worth of the centre-periphery approach, bringing together as it did groups of experts of high professional standing in a given subject area and the generation of curriculum 'packages' informed by research and observation of good practice, there were also disadvantages. For instance, the intentions of the innovation were sometimes misunderstood, modified or distorted by implementing teachers and this resulted in the curriculum development not being put into practice in a way which

reflected its original conception. This state of affairs was variously attributed to curriculum developers' inability to express curriculum intentions unambiguously, or to the fact that teachers were not always prepared to accept the values inherent in the curriculum materials. More persuasive reasons, however, point to the inability of nationally-developed curricula to provide curricular content which treated educational issues of local relevance, or to account satisfactorily for actual conditions in schools which affect curriculum implementation.

As a result of some expressed dissatisfaction with the centre-periphery approach, efforts were made to overcome the problem of the 'gap' between curriculum intentions and practice. A number of projects was established, e.g., Modular Courses in Technology and the Ford Teaching Project, in which the same group of teachers occupied a dual role: first, it had extensive responsibility for developing a course and its associated materials and, second, for implementing it. The case for this style of development was that teachers, given appropriate support from an 'expert' or consultant from 'outside', were in a more favourable position to identify and solve their own curriculum problems than a group of people that was external to the institution. Of particular relevance was the fact that institution-based curriculum development was able to appreciate more fully the conditions relating to manpower and facilities as they prevailed in a particular school or group of schools. This 'problem-solving' approach to curriculum innovation is outlined by Havelock (1971).

A variant of the collaborative approach to curriculum development described above started to feature during the late '60s and early '70s. This attempted to combine the perceived benefits of the centre-periphery model with those involving teachers more closely in the

development of curricula. Whilst the nature of the collaboration revealed itself in a number of different ways, the extent of teachers' involvement was not quite as pronounced as in the problem-solving approach. Nevertheless, this model always denoted co-operative work between institution-based teachers and 'outside' experts in both the development and the implementation of a curriculum innovation. Examples of this particular approach were the Geography 14-18 Project and the Nuffield Working with Science Project.

The legacy of the curriculum movement of the 1960s and 1970s in the school sector may thus be summarized under two main headings:

(i) the development of teaching and learning materials on a very large scale;

(ii) the growth and diffusion of curriculum experience and expertise.

In relation to (i), a wealth of materials exists today as a result of almost two decades of funded curriculum development work, aimed at the school sector. These materials relate to subjects traditionally taught in school as well as to 'newer' study areas and reflect what were often, at the time, new approaches to the nature and organization of content, new teaching and learning methods, new examination procedures and, sometimes, new role relationships between teacher and taught. Taken as a whole, they vary considerably in the nature and extent of their structuring: some are highly structured whilst others were designed to afford the implementing teacher considerable choice in how the materials were to be used. Finally, it is important to note that most, if not all, the materials were generated through ab initio development which, at that time, effectively established this type of development as a dominant strategy.

In relation to (ii), the curriculum movement initially concentrated the responsibility for the development and dissemination of the 'new' curriculum 'packages' in the hands of a few, thus containing curriculum expertise at the 'centre', and leaving teachers in the role of curriculum implementers. Later, however, more practising teachers became involved as curriculum developers themselves, which, to some extent, spread this concentration of expertise to those situated at certain points on the 'periphery'. Whilst this process did not touch a large majority of teachers, it did mean that rather more practitioners than before were acquiring curriculum development expertise. Moreover, all who became involved in the implementation of Nuffield and Schools Council projects necessarily gained an increased awareness of the nature and processes of curriculum innovation.

Section 1.2: Curriculum change in Further Education in the 1970s

In a text first published in 1979, Cantor and Robert (1979, p.176) report that

> "... Ten years ago, relatively little research into further education was being conducted and curriculum development was virtually non-existent. However, although the position is improving steadily, the further education section still lags substantially behind the school sector in both respects".

Prior to the establishment of the Technician Education Council (TEC) in March 1973 and the Business Education Council (BEC) in May 1974 (and the corresponding Scottish councils, SCOTEC and SCOBEC), the main form of curriculum activity undertaken in the further education (FE) sector was that of course development. Course development may be thought of as the 'translation' of pre-determined (often by an 'outside' body) sets of intentions into educational actions which, it is hoped, will meet the stipulated requirements. Such intentions are usually presented either as guidelines or in some form of syllabus, and are

accompanied by defined assessment procedures. Because of these characteristics, course development is normally undertaken within institutions, rather than at a national level (although such activity may be supplemented in some instances by aspects of regional co-operation).

However, following the recommendations of the Haslegrave Committee (1969), TEC and BEC were established. These two independent bodies were

> "to plan, administer, and keep under review the development of a unified national pattern of courses of technical education for technicians in industry and in the field of business and office studies, and in pursuance of this, to devise or approve suitable courses, establish and assess standards of performance as appropriate". (Haslegrave Report, 1969, quoted in Cantor and Roberts, 1979, p.57-58)

The implementation of these proposals under the aegis of TEC and BEC marked the beginning of a significant change in the nature of curriculum activity in the FE sector. Reminiscent of the external pressures which impinged on the school curriculum in the 1970s, the FE sector found itself at the receiving end of political pressures which, through the newly-established national machinery of the two Councils, were seeking a rationalization and, indirectly at least, some unification of course provision. However, TEC and BEC effectively shifted the onus of responsibility to respond to such rationalization demands by indicating that the expectation was that the FE sector would bring about this change "internally" i.e., through activity within its own institutions. In practical terms, this meant that FE staff were required to engage in curriculum development tasks which involved the

(i) articulation and operationalization of educational intentions;

(ii) 'translation' of these intentions into appropriate learning and teaching programmes;

(iii) implementation of these programmes in work with students.

Other initiatives were to follow which resulted in increased curriculum development activity on the part of FE staff. As a result of a major conference in March 1976 on the theme: '16-19: Getting Ready for Work', the first Unified Vocational Preparation (UVP) schemes were proposed (Cantor and Roberts, 1979). By providing broad curriculum frameworks for the development of college-based programmes, the Department of Education and Science (working through the Local Education Authorities) and the Department of Employment (working through the Training Services Division of the Manpower Services Commission), effectively, but doubtless inadvertently, ensured that the curriculum development skills which were being acquired by the FE sector would be further deployed in the development and implementation of Vocational Preparation programmes.

Therefore, whilst in many areas of general and vocational non-advanced FE, course development continued to feature as a significant mode of activity in the 1970s, there was increasing pressure on FE staff during this period to become involved in curriculum development in relation to TEC, to BEC and to the rapidly expanding area of Vocational Preparation. In some ways, the nature of the change required of FE staff bore similarities with that which confronted school staff during the period of the curriculum movement: the need to accept and explore new role-relationships between teacher and taught, to try out new pedagogical strategies and procedures, and to adopt new assessment techniques. In other ways, however, there were obvious differences between the school experience of curriculum innovation and the task facing the FE sector. Unlike school-based staff who had been largely in receipt of project-type curriculum development based on the centre-periphery model, there was little (with the possible exception of lower-level BEC schemes) available for FE in the way of teaching and

learning materials devised by 'experts': the generation of such materials had to come from FE staff working in their own institutions. Moreover, the nature of curriculum development tasks in FE potentially covered a much broader spectrum of needs in terms of subject areas and in terms of the age range, as compared with the school situation.

In assessing the 'readiness' of FE staff for a major curriculum innovation such as TEC, Cantor and Roberts (1979, p.68) state:

> "Another, even more important development that has been required from the start is a co-ordinated programme in staff development to acquaint further education teachers with the mechanics and principles of curriculum design. While it may be the case that this responsibility should be more with the colleges themselves and the teacher training institutions than with TEC, it is nevertheless patent that the Council overestimated the degree of professional expertise in the colleges. Moreover, although the Further Education Education Staff College and the technical teacher training establishments have made attempts at offering suitable courses, the national provision has been quite inadequate to meet the needs".

This statement has validity in relation to the demands of BEC and Vocational Preparation. Whilst BEC, for example, adopted a more centralized approach in comparison with TEC by providing more courses and thus initially not requiring staff to become involved in curriculum development tasks to the extent demanded by TEC, it is nevertheless the case that assumptions were made by BEC about staffs' ability to become involved in curriculum development issues - in particular, the integration of curricular content, the impact of new teaching and learning strategies and the use of new assessment methods. Arguably, too, the same situation pertained with respect to the response by FE to Manpower Services Commission (MSC) initiatives.

Against a context of concern about the curriculum demands being placed on FE staff, the Further Education Curriculum Review and Development Unit (FEU) was established by the DES in January 1977. Although it had only a small staff and limited funds, its brief was to

> "... act as a focal point for curricular matters in further education and to promote a more co-ordinated and cohesive approach to further education development in England and Wales". (Cantor and Roberts, 1979, p.188)

One of the earliest projects commissioned by the Unit (from the University of Keele in 1979) concerned a review and analysis of curriculum enterprises outside FE (mainly at secondary level) in terms of their curriculum styles and strategies, and an exploration of the implications of the findings for FE-based curriculum development. When the project report was published in 1982, one of its conclusions was that

> "...In the last decade, the further education sector has been faced with an unprecented curriculum explosion spanning both vocational and, more recently, pre-vocational provision, a situation resulting in demands on staff which were quite incompatible with the curriculum development ....expertise actually available within the sector". (FEU, 1982, p.128)

It therefore stressed, very strongly, the need for FE staff to be involved in staff development programmes which aimed (i) to provide a thorough understanding of the principles of curriculum development and (ii) to create opportunities for staff to acquire curriculum development expertise. One way in which such an understanding might be achieved was to examine the processes and underlying philosophy of curriculum development which had occurred elsewhere (particularly at secondary level) and thereby to identify the lessons which the FE sector could learn from this activity. However, it also needed to be recognized that such activity had resulted in the generation of a wealth of high quality curriculum materials (teacher materials, student materials and resource materials) in a wide range of subject/study areas which had been tried and tested 'in the field', and that many of these materials might, after suitable adaptation, be of value in FE. Moreover, the conduct of adaptive curriculum work offered an effective vehicle for the acquisition of curriculum development experience and an important means whereby FE might respond to 'new' curriculum needs. Thus the legacy of the

curriculum development movement in schools in relation to FE could be restated as

(i) the accumulation of knowledge, experience and expertise in all aspects and stages of the curriculum innovation process which, quite obviously, had 'transferability' to curriculum innovation concerns at FE (or, indeed, at any other level);

(ii) the availability of a 'pool' of good, well-designed curriculum materials which might potentially be used to meet a range of needs other than those for which the materials were originally intended.

Section 1.3: The case for adaptive curriculum development in the Further Education sector

The historical precedents to be associated with the curriculum movement in the school sector (described in 1.1 above) and the characteristics of the FE curriculum scene in the 1970s (described in 1.2 above) are key elements in arguing the case for adaptive curriculum development and, in particular, for understanding the potential of such a strategy to meet the demands for curriculum change in FE in the 1980s.

However, any curriculum development (whether undertaken by adaptive or ab initio development) is a complex undertaking. The articulation and operationalization of educational intentions and their 'translation' into learning and teaching programmes (discussed in 1.2) require an understanding of the principles of curriculum planning and design, as well as an ability to make decisions in an informed and systematic manner. These skills may be acquired by gaining experience in a range of activities such as

(i) writing aims, goals and objectives;

(ii) selecting, rejecting and organizing subject/study content;

(iii) designing learning experiences;

(iv) being involved in the trialling of curriculum materials;

(v) analysing and evaluating curriculum materials.

Alternatively (or additionally), expertise in these areas may be of a theoretical nature, acquired through various forms of study (e.g., in-service courses, staff development programmes). As demonstrated in 1.1, the curriculum movement, spearheaded and funded by 'external' bodies such as the Nuffield Foundation and the Schools Council, provided a facilitating structure in which curriculum experience and expertise in these activities was gained by many working in the school sector. The situation which existed in FE in 1980 (when the study was initiated) may be contrasted with that of the school sector and summarized as follows:

(i) a dearth of curriculum experience and expertise;

(ii) strong external pressures on the sector to respond positively to new training needs, to provide vocational preparation and to cater for the needs of the unemployed;

(iii) the deleterious effects of the absence of a body equivalent in size, funding and operational scope to that of the Schools Council, a consequence of which was the unavailability of curriculum 'packages' designed for the FE sector.

It is against this context that the case for adaptive curriculum may be considered.

In order to demonstrate the advantages of adaptive curriculum development, one needs to compare such a strategy with ab initio development (see 1.0 above), both in theoretical terms, and as a

practical proposition. Ab initio development is predicated upon the articulation of educational intentions, normally in relation to a particular target group. These intentions are operationalized through, in the first instance, the identification of curriculum content, teaching approaches and learning activities which are seen as appropriate and reflective of the philosophy underlying such intentions. Learning materials (and sometimes also teaching materials) are then generated which embody the educational intentions and the curriculum content, pedagogical actions, learning activities, etc., chosen to achieve such intentions. The organization and form of the materials also reflect associated considerations such as the appropriate sequencing of material, the nature of role relationships between teacher and taught, the duration of the course/programme and resource issues. From this, it may be seen that ab initio development is a complex activity, involving a large number of interrelated decisions that concern the 'translation' of the educator's intentions into a material form which may effectively be implemented with learners.

With adaptive curriculum development, some of the same important decisions still need to be made. There must, for instance, be a clear identification of educational intentions and a good understanding of the characteristics of the target group involved. On the other hand, tasks such as the selection and organization of curricular content, and the choice of instructional strategies - both of which are normally major issues in ab initio development - may require only little attention in adaptive curriculum development work. This is because the decision to be taken is already 'framed' by what is 'on offer' and is thus one which is concerned with the acceptance (unequivocal or qualified) or rejection, of what has already been created. Moreover, in adaptive curriculum development, the curriculum worker has at his/her disposal materials,

the effectiveness of which will already have been demonstrated in different educational contexts. Both these aspects may be seen as offering important advantages because they result in substantial savings in relation to time and manpower requirements for the development activity.

No less important as a potential advantage of adaptive curriculum development is the lower level of curriculum development expertise which this strategy should, in many circumstances, require. These situations occur when, for example, 'existing' materials are used directly, that is, without modification or when only very minor changes need to be made. Obviously, in cases where materials can be used directly in this way, this reduces significantly the extent of decision-making on the part of the curriculum developer and contrasts sharply with the greater demands imposed by ab initio development. Even in situations where materials require more substantial modification, the decisions which need to be taken are more straightforward and less dependent upon curriculum development expertise than in ab initio development situations. This is because adaptive curriculum development, based as it is on examples of 'good practice', serves to demonstrate a range of possible options whilst, at the same time, structuring decision-making with respect to key issues in the development of curricula.

Finally, as the work undertaken by the FE sector has steadily expanded over the last fifteen years or so, it has progressively embraced general education, a province which was previously associated predominantly with the school sector. In addition, the rapidly developing area of vocational preparation shares, in some degree, curricular concerns which were hitherto offered in schools under the label of 'Humanities',

'Integrated Studies', 'Social Studies', etc. In theory at least, this suggests that there is some degree of overlap, in general terms, of curriculum content and thus the potential 'transfer' of school-based curriculum materials into the FE sector.

The above stated advantages of adaptive curriculum development which have focused on levels of curriculum expertise, economies of time and manpower, and the availability of materials for such work, are not intended to exclude the consideration of ab initio development as a possible strategy. Indeed, in cases where very substantial modifications need to be made to 'existing' materials to adapt them effectively to meet the 'new' curricular requirement, the amount of time and energy to be vested on conducting modifications might, on balance, be better deployed to create a new 'product' ab initio. Situations may also arise where the judicious combination of ab initio curriculum development and adaptive curriculum development (see Chapter 6 for exemplification of this) may be a sensible approach. What is however being argued here is that adaptive curriculum development should be given serious consideration because it offers a comparatively more straightforward and less demanding means of providing a new curriculum/programme than ab initio development, and therefore must have considerable appeal in situations where staff may not have high levels of curriculum expertise and where resources are strictly limited.

Section 1.4: The research problem

The present research study was conceived (in 1980) against the background outlined in the previous sections. Despite the apparent attractiveness and potential of adaptive curriculum development for the FE sector, relatively little was known about the extent to which such a

strategy was being considered or used to meet new curriculum needs. Thus the first issue to be explored was the incidence of adaptive curriculum development in FE and, on the assumption that some adaptive work was occurring, the general nature of such work. To establish this, two inquiries were conducted, the first shortly after the start of the study and the second four years later.

The second issue for investigation arose in relation to a number of cases of adaptive curriculum development work which were identified in the course of probing the issue of incidence. Here the concern was to explore the particular decisions which guided the adaptive work and to examine the ways they had been arrived at by the curriculum workers. The intention, however, was not to produce a purely descriptive account, for underlying this investigation was the idea that adaptive curriculum development, in common with ab initio development, should be informed by a rational system of decision-making. Thus, the focus was on an examination, in an analytical way, of actual instances of adaptive work in order to establish to what extent they conformed to a rational system of decision-making. This, of course, could not be done without some model of a decision-making process.

It soon became evident from literature searches that a model suitable for the analysis of adaptive curriculum development work in FE did not exist. Thus an important aspect of this study was the development of an appropriate theoretical framework which could be used to analyse, in depth, examples of adaptive curriculum work. More specifically, it was intended that this framework should serve two functions, viz.,

(i) to identify the nature and characteristics of the decisions and procedures involved in the conduct of adaptive curriculum development work - and, conversely, to demonstrate what

decisions and procedures had not featured;

(ii) to appraise the validity of the model by investigating to what extent curriculum workers' decisions and actions were characterized by rationality.

The framework was arrived at through applying principles of rationality to the concept of adaptive curriculum work which resulted in a systematic identification and analysis of the major decision-making issues which, from a theoretical stance, are seen to feature this type of activity. Further, it sought to highlight a sequence of decision-making and to demonstrate the various options and activities which may arise at each stage.

The next stage of the study involved the application of the theoretical model to a range of available cases. The view was taken that the insights gained from this analysis, although important in themselves, were not to be seen as an end in themselves, but rather as the basis for generating guidelines and recommendations for the purposeful and effective pursuit of adaptive curriculum development work in situations such as those which had been considered. Thus the overall intentions of the study were not merely to report on the incidence of this approach to curriculum innovation, but to provide a set of analytical tools which would help curriculum workers to develop and evaluate their own practice in this area of work.

The methodology used to gather the information which is reported here was chosen in accordance with the nature of the research questions and issues under consideration. Thus the information concerning the extent to which adaptive curriculum development was being used in colleges of FE and the general nature of the work was collected by means of brief questionnaires. The first set of questionnaires was administered in

1980-1981. This provided the essential background information which was to inform subsequent research activities. However, because of the protracted nature of this study (which was conducted on a part-time basis, alongside normal employment), the opportunity arose to administer a further set of questionnaires in 1985 which probed into essentially the same areas. The information which emanated from these two sets of questionnaires allows some kind of comparative picture to emerge about the development of adaptive curriculum development work during the intervening period.

Section 1.5: Structure of the thesis

Chapter 2 of the thesis reviews the literature on adaptive curriculum development work and the contribution it makes to a general understanding of the nature and processes of such work. In particular, it appraises the relevance and applicability of the theoretical considerations and reported practices to the type of adaptive work envisaged in the FE sector.

Chapter 3 presents a model of adaptive curriculum development which is predicated on the theoretical appraisal of the various stages which feature in the conduct of adaptive work, and on the detailed analysis of 'key' decision-making points and associated activities. It is closely linked to Chapters 6 and 7 in that it provides a 'reference' against which actual attempts at adaptive curriculum work may be described, analysed and evaluated.

Chapter 4 gives a detailed account of the research design and methodology used in relation to two main areas of inquiry conducted in 1980/81 and 1985, viz., (i) the incidence of adaptive curriculum work in

the FE sector; (ii) the general nature and defining characteristics of this type of work.

Chapter 5 presents the findings of the investigation into the incidence of adaptive curriculum work in FE and offers some observations about the general nature of adoption/adaptation.

Chapters 6 and 7 concern the application of the theoretical framework presented in Chapter 3 to a number of cases of adaptive curriculum work conducted in FE colleges. Chapter 6 uses a 'case-by-case' approach, analysing and evaluating in detail the major decision-making issues, the nature of the decisions taken and the procedures used to bring about modifications to curriculum/resource materials. Chapter 7 adopts an 'overview' approach to this case-study material and, focusing on the same issues for analysis and appraisal as featured in Chapter 6, offers generalizations about the characteristic features of adaptive curriculum decision-making and the strategies in evidence in this work.

Finally, Chapter 8 summarises the major findings of the study and identifies its difficulties and shortcomings. It however concentrates on suggesting possibilities for future work in this area by offering guidelines and recommendations to curriculum workers for the conduct of adaptive curriculum work.

CHAPTER 2: REVIEW OF RELEVANT LITERATURE

Section 2.0: Introduction

In this chapter, a review of the literature relating to adaptive curriculum work is presented. The function of this review is two-fold:

(i) to appraise the extent to which available accounts contribute to a general understanding of the nature of adaptive work and its associated activities and procedures;

(ii) to evaluate (a) a number of theoretical models proposed for the adaptation of curriculum materials and (b) the assumptions underlying reported instances of adaptive work in terms of the guidance which they offer to the practitioner.

In the first two sections of this chapter, the concern is to identify the concepts and modes of understanding typically associated with the general notion of 'curriculum adaptation', and to demonstrate the theoretical propositions and pragmatic relationships associated with adaptive work. Following this, a range of adaptation attempts is described and analysed in terms of the insights and understanding of the topic which is promoted. Finally, an appraisal is offered of the extent to which the information to be gained from the literature facilitates the conduct of adaptive work in practice.

Section 2.1: Concepts associated with adaptive curriculum development

The examination of the literature relating to what has been referred to so far in this study as 'adaptive curriculum development' reveals that this is not a term that has been used by writers. However, the terms 'adaptation' and 'adoption' are widely employed but frequently, according

to Bloch (1978), do not have very specific meanings attached to them. In a number of instances, e.g., Gratton et al. (1974); Williams (1979) Sayer and Jones (1984); Lambers and Griffiths (1984), the term 'adaptation' is freely used in accounts which describe attempts to modify curriculum/resource materials. However, no definition of the term is offered and the reader is obliged to infer a definition from reading about various processes and procedures which these authors describe as being associated with 'adaptation'.

Moreover, different authors use the term 'adaptation' in different senses. Bloch (1978) comments on the variety of interpretations given to 'adaptation' and on the lack of reflection devoted to the concept. She attempts to rectify the deficiency by proposing the following definition:

> "Adaptation is the process in which elements of instructional materials are evaluated in view of creation of a product [sic] more nearly suited to the demands of a situation differing from that which stimulated the original materials". (Bloch, 1978, p.9)

In a careful attempt to explain key terms in this definition, she explains that here "elements embrace a very wide spectrum of possibilities ranging from individual words or methods...to the pattern and appropriateness of content and methodology". 'Instructional materials' include both student learning and teacher resource material, presented through various media, "as well as statements of goals and rationales". At the heart of adaptation, however, as Bloch conceives it, is the process of evaluating the 'original' materials in relation to the educational setting in which they are to be used. The evaluation, she contends, should be conducted in a manner which pays heed to factors such as "notions of ideology, history, psychology, content, methods, technology,..." and may well result in some elements of the materials being discarded, re-structured or replaced by other elements so as to achieve a product "more nearly suited to the demands of a situation

differing from that which stimulated the original materials".

According to Lutterodt (1980), Bloch's definition is one which effectively equates adaptation with evaluation. Lutterodt argues that this emphasis is inappropriate because "the heart of the adaptation process is surely the modification or refinement of the materials". Although she agrees that prior evaluation of the materials to be adapted is an obvious necessary prerequisite, she contends that adaptation should not be identified predominantly with the process of evaluation. She therefore offers the alternative definition:

> "Adaptation is the process in which elements of a planned curriculum are modified or refined in order to provide one more nearly suited to the demands of a situation differing from that for which the original curriculum was developed". (Lutterodt, 1980, p.124-125)

Here, the essential components are the 'elements' of the curriculum, the 'modification' to be made, and the differing 'situations' which make the changes necessary.

In explaining the key terms of this definition, Lutterodt agrees with Bloch's interpretation and adds that "the number and diversity of elements in potential need of adaptation will thus be very great indeed". She draws attention to the fact that one can conceive of different kinds of modifications - principally those which "leave the essential character of the curriculum intact" and those which result in "essentially a new and different curriculum". This latter is not included in her definition because, in this situation, the existing curriculum (or curricula) is not 'adapted' but rather "used as resource material in what are essentially new developments". Finally, the term 'planned curriculum' is substituted for 'instructional materials' as used by Bloch, because of "its rather narrow implication of curriculum hardware". Summing up her approach, Lutterodt states that her

interest is in "the rather formal process of adaptation where a published course is recast in a new setting".

The major point of interest here is that both Lutterodt and Bloch are essentially concerned with situations where the curriculum is left "intact", that is, where its overall coherence is left undisturbed and where no attempt is made to change, in any fundamental way, its key elements - educational intentions, target population, instructional procedures, content, etc. An example of this practice is reported by Bloch relating to the use of "Individualized Science", an elementary school science developed in the USA which was later used in a different national and cultural context, that of West Germany.

However, writing one year after Bloch, Blum (1979), in contrast, includes as instances of adaptation, situations where "existing curricula are used as resource materials for new developments" - and this more extended view is reflected in another published paper (Blum et al., 1979). His definition is as follows:

> "Curriculum adaptation is the process of changing instructional materials developed in one situation to create a product better suited to the needs and abilities of learners and teachers in another situation, and in line with the socio-cultural values held by the target population". (Blum, 1979, p.693)

The use in Blum's definition of terms such as 'better suited to the needs and abilities of ... teachers' and 'in line with the socio-cultural values held by the target population' reflects his concern with what will be referred to in this study as 'cultural transplantation', viz., the transfer of a curriculum originally developed for use in one country to the educational environment of another country. To expand on this, it should be noted that Blum's work on adaptation, in common with that of Bloch and Lutterodt, contributes substantially to the quite large body of literature relating to the widespread use, in other countries, of

curricula, particularly in science education, developed in the UK and the US. Generally, the writers in this particular field point to the attractiveness of 'importing' into developing countries, teaching and learning materials produced under the aegis of, e.g., the Nuffield Foundation and the Schools Council in England. Blum (1979), for instance, in considering curriculum development in the sciences, expresses the view that it is an expensive and time-consuming endeavour which also makes heavy demands on manpower in relation to specialized knowledge and expertise. He concludes that

> "only in a few countries are the needs for curriculum reform in science education and the available resources - money, time and trained manpower - in balance. In most nations, and above all in the developing world, the urge for a quick but also profound change outweighs the resources manifold. A possible shortcut to overcome the constraints, at least partially, is to adapt curricula developed elsewhere". (Blum, 1979, p.694)

Many of the accounts of adaptation activities that are found in the literature describe actual experiences of implementing teaching and learning materials developed and 'exported' by another country, and frequently identify ways in which particular projects have been adapted to meet particular needs. In two fairly representative accounts which feature the phenomenon of 'cultural transplantation' (although this is not a term which is used by the writers), Williams (1979) and Mandler and Silberstein (1979) offer no definition of the term 'adaptation'. Nevertheless, from the descriptions of the various adaptation activities, it is clear that the authors conceptualize adaptation in a similar sense to that described by Lutterodt, viz. that adaptation is a process centred on modifications which are necessary in order to implement curriculum materials in a geographical or cultural context which is different from that for which the materials were originally conceived. Moreover, the modifications which they describe are of a relatively minor nature and do not alter the characteristics of 'key' curriculum variables or disturb the underlying philosophy of the 'original' materials.

The fact that much of the literature on adaptive curriculum work relates to what has been referred to as 'cultural transplantation' in no way invalidates its contribution to a general understanding of the nature of adaptation. Nevertheless, the definitions offered by Bloch and particularly Lutterodt, backed up by descriptive accounts such as those of Williams, and Mandler and Silberstein, tend to limit the scope of the term to the modification of 'whole' curricula, or at least discrete and coherent elements of it. Blum's (1979) definition is therefore of particular interest because it allows for a conceptualization of the term which may additionally relate to the creation of a new curriculum by selecting from, and integrating, elements from another or several curricula.

An alternative interpretation of the term 'adaptation' is implied by curriculum workers from the Community Education Section of the Open University. Describing ways in which learning/resource materials have been used for purposes different from those originally planned by course teams, one writer (Rogers, 1983) states that such practices arise

> "...[where] materials are used for a different kind of course (e.g., adapting undergraduate materials for vocational training), for different types of student, different time-scales and different learning environments (e.g., modifying self-study materials for use in the classroom)". (Rogers, 1983,p.49)

Such statements, taken at face value, appear to suggest that the scope of adaptive curriculum work is potentially wider than even Blum (1979) envisages. It raises the possibility that 'adaptation' may well embrace situations where not only are elements of a curriculum or curricula "used as resource material in what are essentially new developments" (Lutterodt, 1980) but where materials developed explicitly as learning/resource material are modified for situations where essential features, such as target population, teaching approaches, course orientation, etc., are not 'matched' in the 'new' context. Rogers' point

has considerable appeal as a description of an approach to adaptation which is very different from that envisaged by Blum, Lutterodt, etc.

The term 'adoption', unlike 'adaptation', occurs less frequently in the literature but has a less problematic and more generally acceptable definition. Lutterodt (1980) states that

> "Adoption implies the taking over of a curriculum for use in a given setting, without the introduction of planned changes ...". (Lutterodt, 1980, p.125)

This is a view with which Bloch (1978) concurs. She discusses, for instance, the very extensive use, on a world-wide scale, of the Biological Sciences Curriculum Study materials from the US which, at the time of her writing, had been translated into 19 different languages for use in 60 countries, and makes the following comment, using the term 'adopted' advisedly.

> "This wide-spread use of original, or at least little-changed versions of science curriculum materials applies likewise to the various Nuffield programs. Particularly in the less developed countries of South East Asia, in Malaysia, for example, the curricula have been adopted because of their appropriateness to the educational system which mirrors, as it does in practically all the English ex-colonial countries, that of Great Britain". (Bloch, 1978, p.3-4)

These statements suggest that the term 'adoption' should be used in situations where a curriculum is merely 'translated' or where only very minor changes are made to the materials. Bloch later reiterates this view:

> "....adoption [implies a situation where] the whole of the elements [of a curriculum] are taken over without attempts at some sort of adjustment of the materials". (Bloch, 1978, p.10)

In a general sense therefore, there is some element of consensus between the various writers that 'adoption' may be used to describe situations where a whole curriculum or programme, or discrete, intellectually coherent components of one or more programmes, are used directly, i.e., without modification. 'Adaptation', on the other hand,

implies situations where modifications to the 'original' materials are undertaken. Lutterodt (1980) states this distinction very clearly. Bloch (1978), on the other hand, casts some uncertainty on this when she states that adoption concerns

> "...the use of original, or at least little-changed versions of ... materials". (Bloch, 1978, p.3)

This effectively introduces the idea that adoption may involve some change and thus raises the question as to how much change may be subsumed within this term.

Tütken (1983) asserts that whilst 'adoption' in the sense of 'translation' of materials into an educational system "using the same language" does not constitute an adaptation, translation into another language is a sufficient condition for the designation 'adaptation'. He lists other situations where 'adaptation', as opposed to 'adoption' arises:

(i) where there are structural and organizational differences between the 'exporting' and 'importing' education systems;

(ii) where the parameters of the two systems are different. Such parameters may be ideological or political and give rise to different assumptions and expectations which have a bearing on the curriculum;

(iii) where there are differences in the level of educational resources (e.g., there may be an absence of exemplars in particular countries which correspond to those used in the original curriculum. (Tütken, 1983, p.481-482, paraphrased from the original German text).

In this way, Tütken defines 'adaptation' in terms of the identification and categorization of difference (organizational, educational, cultural, ideological, political, linguistic, etc.) between the context for which the materials were originally designed and a context in which they were

later implemented. His use of 'adoption' and 'adaptation' therefore, unlike that of Lutterodt, is not related to the extent, or otherwise, of the modifications conducted on materials but to differentiation of context.

The descriptive accounts of adaptive curriculum work offered by Williams (1979) and Mandler and Silberstein (1979), to which reference has already been made, similarly conceptualize their activities in terms of 'adaptation', even though the modifications which are reported to have been carried out on the materials were of a minor nature and did not substantially alter key aspects of the curricula, viz., educational intentions, instructional approaches, content or the age and ability of the student target population. Where change of a more extensive nature was required, this was typically brought about by discarding aspects of the 'original' content and/or by adding 'new' materials to what already existed. Summing up such attempts, Lutterodt (1980) indicates that

> "Adaptations have concentrated on questions of language, both translation into the local language and simplification of English-language texts, adjustment of illustrations, and some amount of restructuring of content". (Lutterodt, 1980, p.123)

The above discussion demonstrates that 'adaptation' frequently has not had a precise meaning attached to it and that many commentators have not given definitions which clarify, in operational terms, the distinction between 'adoption' and 'adaptation'. Nevertheless, the attempts of Bloch (1978) and Lutterodt (1980) are helpful in their indication that the pragmatic difference between the two terms is one of degree, rather than of kind, and that, operationally, the term 'adaptation' is best confined to situations where modifications are of a substantial kind, whilst 'adoption' applies in situations where the modifications are of only a very minor nature or where materials are used directly, viz.,

without change. This distinction still requires further refinement in the practical situation to make clear what constitutes 'substantial' and 'very minor' change respectively (a matter which is discussed further in the following chapter). Nevertheless, the definitions, as far as they go, do cast light on otherwise much-used but ill-defined terms.

Section 2.2: The relationship between adoption/adaptation and ab initio development

The relationship between adoption and adaptation on the one hand, and ab initio development on the other, merits some attention. In Chapter 1, a broad distinction was drawn between 'adaptive curriculum development' (to embrace 'adoption' and 'adaptation') and ab initio development. It was stated that curriculum innovation involving the former might 'adapt' or modify in some way an existing curriculum (or curricula), whilst the latter indicated the creation of a curriculum and its associated materials 'from scratch'. It is further suggested that these are two separate yet related strategies for bringing about curriculum change.

At a theoretical level, the distinction between adoption/adaptation and ab initio development is clear: in adoption/adaptation the curriculum worker is exposed to an already developed curriculum and its associated materials, and his/her decision-making then focuses on whether, in the light of the educational requirements he/she has in mind, to accept without change, to modify or to reject, what is on offer. Acceptance without change constitutes adoption; acceptance with modification constitutes, in principle, adaptation. In the case of ab initio development, however, the focus is on the conception of a curriculum to meet certain educational objectives and the 'translation' of that

conception into a material form in a way which (possibly but not inevitably) merely draws on ideas emanating from other curricula.

In adaptive curriculum development, likewise, attention has to be given (or ought to be given) to the articulation of educational intentions; this is followed by the 'translation' of 'existing' materials to meet the needs identified. Thus, the two strategies are not diametrically opposed, but rather similar. If, for instance, Williams' (1979) account of the numerous adaptations of Scottish Integrated Science outside the UK is considered, it will be noted that adaptation involved not only minor linguistic and illustrative adjustments and a small amount of re-writing and re-sequencing, but also the addition of some 'new' material "which was used to support the existing materials". For teachers in the Carribean, for example, this produced a lesson-by-lesson Teachers' Guide "to help the inexperienced teacher" which contained recommendations about teaching methods, the organization of practical work, questioning, discussion, 'consolidation' and conclusion. For the pupils, additional text material, background reading and locally-produced worksheets were generated to render the materials more culturally acceptable and relevant. Many other accounts, too, (e.g., Gratton et al., 1974; Bloch, 1978; Blum, 1978; Blum et al., 1979; Mandler and Silberstein, 1979) describe case-studies where the process of adaptation predominantly concerned the selection of what was seen as appropriate and relevant from 'existing' materials, the discarding of what was inappropriate and non-relevant, and subsequent replacement by 'new' material developed ab initio.

The use of ab initio development to support 'existing' materials in adaptive curriculum work has been described by Ritz (1977) as 'curriculum augmentation'. He defines this term as

> "...the process of further developing and strengthening available curricular materials along specified dimensions..." (Ritz, 1977, p.389)

and uses it to report on the adaptation of an elementary school studies unit ('The House in Ancient Greece'), developed in the MATCH project of the Boston Children's Museum. In this project,

> "a modified Teachers' Guide [was produced]..., an audio-tape to supplement the kit materials and a teacher education component". (Ritz, 1977, p.389-90)

In offering a rationale for 'curriculum augmentation', Ritz comments on the "enormous number of new learning programs and materials which were produced in the '60s" and notes that

> "...their diversity in terms of format, composition and structure sometimes means that, in certain cases, design characteristics deemed important by the user are absent". (Ritz, 1977, p.390)

'Curriculum augmentation' is therefore suggested as a form of adaptive curriculum work which does not modify existing materials but rejects what is seen as irrelevant or inappropriate and develops 'new' material to correct the deficiency.

Possibly the most clearly articulated statement of the relationship between adoption/adaptation and ab initio development is to be found in the work of Rogers (1982; 1983). Drawing on evidence derived from case-study material of the 'alternative use' of Open University material, she suggests that adaptive curriculum development work, in practice, manifests itself in four broad patterns of activity, one of which is 'augmentation'. This term is used in the sense already described above and occurs

> "...where new items are prepared to support or re-interpret those which have been derived from the original material". (Rogers, 1982, p.12)

She claims a number of functions can be served by the use of 'augmentation', viz., to increase the conceptual depth or specialization to which a topic is studied; to act as 'linking' or 'bridging' material

between different 'adopted'/'adapted' items; to render the material suitable for use in group situations; to update material; or to make up for "perceived deficiencies" in the original material.

Whilst it may be argued that some of these functions might equally well be served through modification rather than through ab initio procedures, the essential point of interest here is that she draws attention to the fact that adaptive curriculum development may include elements of ab initio development.

Two of the remaining patterns of activity which Rogers associates with adaptive curriculum development in practice are equivalent in sense to 'adoption' and 'adaptation'. Her term 'selection' is used to describe a situation where no change is made to 'existing' materials - although it implies that no curriculum or programme will be entirely appropriate or relevant for the 'new' situation and that, therefore, selection and rejection of content necessarily occur. Her term 'transformation' applies to "change of any kind", although the examples which she gives in relation to this term would tend to place the activity in the 'adaptation' category:

> "...re-working text, using a different medium (e.g., redrafting a sound recording as a transcript) ... Changes may be in terms of level of difficulty, in the context used, or in the degree of specialization: they may adopt a different ideological perspective or re-order materials to fit in with other parts of a teacher programme". (Rogers, 1983, p.54)

Of particular interest, however, is her fourth and final term - 'integration' - which, she implies describes a situation where, in the sense outlined above, 'adopted', 'adapted' and ab initio developed materials may be brought together

> "...so that what students [actually] experience is a cohesive course, not just a set of isolated course components".

but adds that

> "the more complex the course structure, with materials and activities derived from a wide range of sources, the more difficult the task of integration". (Rogers, 1983, p.54)

The survey of available literature thus highlights a distinction, at a theoretical level, between adoption and adaptation, and between adoption/adapatation and ab initio development. 'Adoption' and 'adaptation' may be seen as points to be located on a continuum describing degree or extent of modification conducted on 'existing' materials, ranging from no modification or at least, very minor alteration (adoption) to substantial modification (adaptation). Ab initio development may be seen as an activity embracing substantially different procedures because it involves the creation of a curriculum or programme 'from scratch'. However, in practice, adaptive curriculum development work may involve not only adoption and/or adaptation but also the possibility of the combined use of ab initio development with adoption, with adaptation or with both. Chapter 6 will also demonstrate that, at the level of decision-making, the differences between adoptation/adaptation and ab initio development are not as great as might, at first sight, be anticipated.

Section 2.3: Documented accounts of adoption/adaptation work

The literature contains a number of accounts of adoption/adaptation attempts, most of which fall into one of two categories:

(i) case-studies relating to science education outside the UK and the US, which exemplify the 'cultural transplantation' model described in the previous section;

(ii) case-studies from adult education, and particularly relating to the areas of health and social welfare, of 'alternative use' of Open University materials.

Such accounts vary substantially in the extent to which they demonstrate a theoretical understanding of the nature and processes to be associated with adoption and adaptation. Some of the earlier case-study material is purely descriptive and, as Lutterodt (1980) complains:

> "Few make any attempt to conceptualize the process of adaptation and do little to generalize beyond their own immediate experience". (Lutterodt, 1980, p.123)

Others, on the other hand, yield important and interesting insights but they have to be teased out of the text because the conceptualization is reflected rather than made explicit. Finally, there has been a number of determined attempts on the part of some commentators (notably Bloch, 1978; Blum, 1978; Blum at al., 1979 and Lutterodt, 1980) to identify the theoretical considerations which need to inform adaptive curriculum development work, to make recommendations and offer guidelines for the conduct of such work, supported by illustrative case-studies.

One of the earliest reported instances of adaptive curriculum work, and one which took place within the FE sector, is offered by Gratton et al. (1974). This describes a project undertaken in 1969 which aimed

> "to establish the feasibility and desirability of adapting to the needs of Printing Craft students the materials produced by the Nuffield projects for 'O' level Physics and Chemistry". (Gratton et al., 1974, p.88)

The focus of this account is on the design and conduct of a feasibility study which involved collecting teachers' views about an appropriate science curriculum for City and Guilds Printing Craft students in terms of relevant teaching aims, content and instructional approaches. These were then compared with the corresponding curriculum features of the Nuffield schemes. As a result of this 'matching' exercise, a number of practical activities was adopted from the Nuffield schemes and supplementary materials, principally in the form of specially designed

information sheets and worksheets, were developed.

The Nuffield schemes were selected for teaching 'main-stream' science to the Printing Craft students because (i) their practical approach was seen as very suitable for such students; (ii) there was a perceived overlap between some of the conceptual matter of the Nuffield schemes and that required by the City and Guilds syllabus; (iii) the 'discovery' method used in the schemes was seen as an attractive learning approach for acquiring some of the underlying principles of Chemistry and Physics.

However, the 'adoption' attempt ran into difficulties when it was realized, on further reflection, that there were variations in the time allocated in schools to the study of the Nuffield schemes and that available to students on craft courses in FE. It was also recognized that a more integrated approach to science teaching would be beneficial for these students, rather than the use of two schemes which taught Physics and Chemistry separately. Finally, it was noted that the Nuffield schemes are designed to form a logical development of subjects and that problems would occur if aspects of the material were merely 'lifted' and used directly.

Despite these perceived difficulties regarding the allocation of time and the organization of content selected and adopted from two different curricula, the project went ahead, using topic areas mainly selected from the 'O' level Chemistry scheme, 'augmented' by material developed ab initio. The evaluation carried out on the implementation of the (mainly) adopted programme, however, produced some disappointing findings. Despite the motivation which some students experienced from conducting the experiments, it was found that

> "many students lack the ability and experience to follow through the investigation in a systematic way and use the information to draw logical conclusions". (Gratton et al., 1974, p.89)

The reason given for this was that the students were drawn from a wide ability range and had very varied backgrounds. Many were unused to 'discovery' methods and had been accustomed "to using practical work for verifying pre-stated relationships". Another problem was that many students did not find the results "sufficiently dramatic". The reasons offered here were that

> "the early stages of Nuffield schemes are geared towards interesting a much younger target group than the City and Guilds students and that the older student is more sophisticated in his attitudes towards experiments". (Gratton et al., 1974, p.90)

The overall conclusions drawn from the evaluation were that

(i) the 'straightforward' use of aspects of the Nuffield 'O' level Physics and Chemistry schemes had not been successful because of the varied background and ability range of the Printing Craft students, and because the 'discovery' method had not enabled them to adequately understand the desired concepts;

(ii) a practical, more adult-oriented scheme, aimed at the special needs of such students but supported by a "more formal method of teaching" and teaching aids, was required.

The study by Gratton et al. is a description of adaptive curriculum development work which includes an evaluation of the 'adopted' product. Although no theoretical conceptualization of the processes of adaptation is offered, the study points to a number of assumptions which underlay the curriculum activity:

(i) the extraction of relevant content for use in a 'new' programme is preceded by some kind of comparative appraisal, based on key features (in this case content, instructional approach and learning activities) of the 'existing' materials

and those intended for the 'new' programme;

(ii) the process of adoption (which Gratton et al. actually referred to as 'adaptation') involves the selection from 'existing' materials, supported by the generation of additional material to render the materials more appropriate and relevant for the 'new' educational content.

It might be argued that the 'adopted' product might have been more successful had a more adequate understanding of the needs, background and ability of the student target population been applied, and that this would have necessitated an adaptation of the two Nuffield schemes. The case for adequate conceptualization of the processes and procedures for adaptation will, however, be fully explored in Chapters 6 and 7.

The majority of descriptive accounts relating to the adaptation of whole curricula emanates from the literature relating to the 'cultural transplantion' type of development described earlier. The Mandler and Silberstein (1979) account of the 'adaptation' in Israel of a chemistry curriculum project (CHEMStudy) 'imported' from the US, is typical of this kind of work. CHEMStudy had been successfully used as a one-year course in US high schools and was chosen for translation into Hebrew for use in Israeli schools. However, it was

> "stretched ... to a three-year course by adding an organic chemistry unit, which, according to Israeli teaching tradition, was thought relevant for Israeli students". (Mandler and Silberstein, 1979, p.301)

In the first instance, then, 'adaptation' was conceived primarily as 'translation'. Whilst changes occurred along two dimensions, viz.,

(i) the addition of supplementary material for traditional and cultural reasons, and

(ii) the extension of the time-scale for studying the course,

the original 'imported' curriculum remained largely intact and in line

with its educational intentions.

The writers, however, go on to describe a "second-stage adaptation", conducted later, following the first round of trialling the materials:

> "because of differences between the US and Israel in school organization, characteristics of students, and natural and industrial resources". (Mandler and Silberstein, 1979, p.301)

This involved a re-writing, in simpler form, of the first seven chapters of the course and the addition of a chapter (on carbon compounds). This second-stage adaptation thus arose in response to perceived differences in the cultural, ecological and organizational contexts between the country for which the project was originally devised and the country where it was later implemented.

Many of the accounts of implementing an 'imported' curriculum for use in another country refer to two phases which occurred in relation to 'importing'. Bloch (1978) for instance, refers to the fact that, initially, curricula were merely translated into the local language and wryly describes a situation in an ex-colonial African country which used a Nuffield 'O' level scheme thus:

> "...the national exams in biology were delayed for a week because the air shipment from England of buttercups which were to be dissected and drawn ... as part of the exam did not arrive. A substitute of a native, simple flower did not occur". (Bloch, 1978, p.4)

As increased awareness of cultural differentiation between 'exporting' and 'importing' countries grew, adaptations typically focused on changing exemplification and learning activities and taking cognizance of features such as a more limited level of resourcing, teachers' expertise, the reading difficulty of the student materials, etc.

The Open University has produced a number of descriptive accounts of adaptations of its materials, particularly those developed by its

Community Education Section (e.g., Calder, Shields and Ballard, 1984; Rogers, 1982; Sayer and Jones, 1984; Ballard and Spratley, 1984; Lambers and Griffiths, 1984). In their original form, these materials are addressed to a reasonably well-informed, reasonably intelligent adult target population, and the content is integrated through the use of topics, themes and issues of concern/interest. The accounts report numerous instances in which materials are used with different types of target group and in different learning situations, and indicate that materials are abridged, extended, "re-combined", etc. (e.g., Calder, Shields and Ballard, 1984; Ballard and Spratley, 1984). Some of these accounts describe situations where Open University materials were expressly made available to professional trainers who were asked to appraise the materials for use as teacher resource and student learning purposes with specialist groups in institutional settings. In the light of their teaching aims, trainers were asked to make selections from the materials and to offer suggestions about how they might be used. This involved providing ideas about instructional approaches and making recommendations about adopting or modifying the materials. This information was then written up as guidelines for the trainers. However, no conceptualization of the nature and procedures to be used in such work is documented and, apart from registering the incidence of adaptive work, these accounts do little to provide general understanding of what is involved.

A more concerted atttempt to provide information about the circumstances under which adaptation takes place and about some of its characterizing features was conducted under the auspices of the Leverhulme Project on 'alternative uses' of (Open University) health and social welfare materials (Rogers 1982). This project, through the use of surveys, postal questionnaires and interviews, produced a body

of information about how a range of Open University courses was being used by teachers and trainers. The report, based on experience emanating from case-studies, provides a list of reasons why adaptation was used, viz.,

(i) to meet the needs of a different kind of student;

(ii) to serve a variety of learning objectives;

(iii) for use in face-to-face teaching situations, often with groups;

(iv) to satisfy different time constraints;

(v) to achieve a greater or lesser degree of specialization of topic or approach;

(vi) to make use of local knowledge, services and expertise.

Elsewhere, Rogers (1983), reflecting on the empirical data which was generated through this project, observes that teachers and trainers carried out modifications to materials which could be broadly categorized into two groups:

(i) 'student-centred modifications' where the focus of change was on the particular needs of the 'new' student group;

(ii) 'tutor-centred modifications' which arose where the materials were 'mediated' by teachers and trainers.

In relation to this latter category, she claims that tutors typically carry out modifications to "express competence" because they feel that simply using pre-prepared materials is somehow cheating, and that adaptation is "inherently second-best". Modification, under these circumstances provides

> "an opportunity to redress the impression that you are failing to do your duty - it expresses a level of competence and commitment that is felt to be lacking if you use the items 'straight'". (Rogers, 1983, p.53)

She also notes that tutors tended to modify material to 'stamp' on it a token of their own autonomy and puts this down to the long tradition of autonomy and personal freedom in British education.

The accounts of adaptive curriculum work described in this section provide some information about

(i) some of the reasons people have put forward for undertaking work of this nature;

(ii) some of its associated procedures and activities;

(iii) perceptions which some tutors have of adaptive work.

The contribution of Rogers and her colleagues at the Open University represents an attempt to abstract, from empirical studies, some of the defining features of adaptation work. However, theoretical considerations have not informed the collection and analysis of the information gathered and this renders it limited in its usefulness. The importance of a theoretical framework within which to conduct adaptation work is also demonstrated by the one documented adaptation attempt that took place in the FE sector (Gratton et al., 1974). Moreover, the adaptations which Rogers (1982; 1983; 1984) describes all relate to the 'alternative use' of what were originally highly flexible materials, expressly designed for 'multi-use'. Arguably, this type of adaptive work does not confront some of the problems which may be encountered when the 'original' materials are more highly structured and less flexible in their intended use. One must therefore be cautious about generalizing from the type of practice reported by the Open University.

These descriptive accounts, then, provide some insights but almost nothing in the way of guidance to the curriculum worker who is considering adaptive work as a strategy for curriculum development, and even less in the way of systematic analysis of what such work entails. The following section goes on to consider the work of a number of theorists who have sought to remedy this deficiency and to offer both theoretical analyses and practical guidelines to the curriculum worker.

Section 2.4: Theoretical issues concerning the nature and processes of curriculum adaptation

If curriculum adaptation is to be carried out in a systematic and effective manner, consideration needs to be given to the way in which 'existing' materials are to be used in the 'new' educational setting, and to the way in which modifications are to be carried out. In order to illuminate some of the issues associated with these processes and to facilitate decision-making in this respect, a number of theorists have proposed questions which need to be considered, or have offered models for the conduct of adaptation work.

Blum et al. (1979) review the way in which a large number of science curriculum adaptations was carried out in the 1970s and identify two major stages of the adaptation process:

(i) the selection of a suitable curriculum for adaptation;

(ii) the adaptation itself.

With respect to the selection of a suitable curriculum, they state that it should be based on a review of several curricula

> "...that seem, at least prime facie, to be adaptably feasible. It is also assumed that the adaptors have a clear idea about the needs of their target population and are determined to choose the best curriculum or curricula". (Blum et al., 1979, p.696)

Describing, with examples, ways in which curricula have been chosen for adaptation, they demonstrate that the more successful appraisals of 'existing' materials result where choice is based upon pre-determined criteria. They note, for instance, that when Swaziland decided to set up an integrated science project based on adaptations, a set of 40 criteria was employed under the headings 'aims', 'content selection', 'learning experiences' and 'resource materials'. On that basis, a particular project (the West Indian Science Improvement Project) was selected for adaptation in Swaziland. They also mention that an even

more effective method, again based on the use of pre-determined criteria, is to screen a number of projects and to develop a 'new' curriculum by recombining the most suitable elements from some of them. This is an approach taken by the developers of the Israeli Elementary Science Project (MATAL), described by Thier (1979).

Concerning the adaptation itself, Blum decribes changes which have typically been carried out. However, he concludes that, generally, both the

> "...selection of curricula for adaptation and the adaptation process itself were done intuitively. Only seldom has a list of criteria been employed, although a more systematic approach could lead to better decisions on the adaptation process". (Blum, 1979, p.292)

In an attempt to provide this 'more systematic' approach, Blum, Kragelund and Pottenger (1979) have proposed a 'Curriculum Adaptation Scheme' (CAS) which consists of two sets of questions to help the curriculum worker identify decision points

(i) in selecting an appropriate curriculum for adaptation;

(ii) in deciding what modifications are necessary.

The model of the adaptation process according to which CAS was constructed consists of three stages:

(i) exploration

(ii) selection

(iii) adaptation.

Before embarking on these stages, Blum et al. (1979) advise that its users have a clear idea about the preferred "philosophical, psychological and pedagogical approaches" which they wish to see reflected in the 'new' programme and that the stage of "exploration" should be informed by

> "a reasonable estimate of the range in age, previous knowledge and/or intellectual development of the target population, their socio-economic and cultural background, their learning habits and the degree of homogeneity existing or envisioned in the target population". (Blum et al., 1979, p.5)

Bearing in mind these criteria, it is recommended that catalogues, directories and compilations of curricular activities are perused during the 'exploration' phase to identify materials which, at first sight, seem worthy of further consideration.

At the 'selection' stage, Blum et al. offer the curriculum worker 94 questions, grouped under five headings ('Framework, Objectives and General Approaches', 'Structure of the Curriculum and Organization of the Subject Matter', 'Learner and Learner Materials', 'Teacher and Teacher Materials' and 'Administrative Questions'), which are aimed at helping him/her to decide whether it is possible and worthwhile to adapt the curriculum (or part of the curriculum) chosen at the 'exploration' stage. At this point it is noted that the questions to be considered cannot offer an "index of adaptability" or lay down rules for accepting or rejecting material. This is because, in answering the questions in relation to his/her own institutional setting, the curriculum worker necessarily bases judgements about what is possible and feasible on values, and that "different people are likely to give different values to the various decision points".

The 'adaptation' stage is guided by a further 90 questions relating to the content and form of student and teacher materials, characteristics of the students and teachers who will be using the materials and the nature of resources in the institution where the 'adapted' materials are to be implemented. The questions are so phrased that they invite a 'yes' or 'no' answer and thus indicate not only what needs to be modified but also the nature and direction of the change.

A small evaluation study conducted with two groups of curriculum workers who used CAS indicated that their awareness of adaptation issues was increased. However, the construction of CAS has been criticized by Lutterodt (1980) on methodological and theoretical grounds. She states:

> "A formative evaluation instrument for science curricula was used as the starting point in the construction of the CAS and this was backed up by empirical information concerning past adaptations. Thus CAS does not proceed from any well-defined conceptualization of adaptation per se and gives little indication of the basis on which various questions should be answered". (Lutterodt, 1980, p.123)

The CAS, however, does not lay claim to providing a description of the activities involved in effecting modifications. Rather its stated emphasis is on the exploration of alternatives and on the selection of curricula for adaptation purposes. It is therefore useful in identifying some, even if not all, the processes and decision-points to be associated with adaptation.

Bloch (1978), working in West Germany, has similar concerns to those of Blum et al. Bloch offers a model of adaptation which embodies the ideas (stated in her definition) that it is a process ("in which elements of instructional materials are evaluated") which results in the creation of a product ("more nearly suited to the demands of a situation different from that which stimulated the original materials"). The model suggests a two-stage adaptation process which features two major decisions:

(i) The choice of a particular set of materials to adapt, based on an assessment of 'need' and an appraisal of available materials.

(ii) The decision, taken after modifications have been carried out, whether to proceed to implementation or to modify further.

She suggests that the first stage of the adaptation process viz., that of

'needs assessment', requires knowledge of the 'existing' curriculum "as well as a comprehensive overview of the aims of a particular subject area within the existing societal framework". Materials are then scrutinized in terms of a set of educational intentions and this can be facilitated by using one of the formalized schemes which exist for the analysis of curriculum materials. Here she recommends that of Eraut et al. (1975), developed at the University of Sussex, as being the most helpful because it offers "a basis for curriculum criticism".

The second stage occurs after various modifications have been made to the materials chosen for adaptation. These modifications are achieved through a variety of activities, "most importantly, the processes by which elements of the 'original' materials are discarded, re-structured or replaced". On the question of maintaining the overall coherence and intellectual integrity of the whole curriculum, Bloch notes that 'discarding' elements of the curriculum can occur without jeopardizing the coherence of the curriculum when it is "composed of a number of units, each having an independent, internally-developed and cohesive theme". She goes on to note that, following the production of trial materials and their implementation, evaluation is conducted, giving rise to three options:

(i) no further modification is necessary because the adaptation is in line with the statement of intentions for the project;

(ii) further refinement is necessary;

(iii) the adaptation is seen as being of little or no value in relation to stated intentions, resulting in the work either being discontinued, a new trial situation investigated or intentions reviewed and altered.

This model shares many similarities to that offered by Blum et al. (1979). In methodological terms, it was formulated in much the same way as CAS - in Bloch's case on the basis of experience drawn from three adaptation projects conducted in West Germany involving "Man: A Course of Study" (MACOS), "Science 5-13" and "Science: A Process Approach". Its concerns, like those of Blum et al. (1979), are with the initial scrutiny of the material, and with the process of adaptation. Unlike Blum et al., however, she does not offer detailed checklists to facilitate decision-making about how to select materials or about the modifications to be made. Rather, she emphasises evaluation of the 'adapted' product and the use of information and feedback from users to further refine, if necessary, the 'new' materials.

Lutterodt (1980) expresses similar reservations about Bloch's conceptualization of adaptation as she does about that of Blum et al. (1979) in that it "provides little analysis of what exactly is involved in the adaptation or refinement as such". Commenting on Bloch's definition, the view is expressed that it is one which "effectively equates adaptation with evaluation" which, she contends is an inappropriate emphasis. The stated aim of Lutterodt's contribution is to build on that of Bloch (1978) and of Blum et al. (1979) in order to focus on the task of adaptation per se, rather than on concomitant activities such as "exploration, evaluation and adoption". There is a clear statement that her analysis relates to "the adaptation of science curricula and with adaptation from one geographical/cultural context to another" and that, in common with Bloch and Blum et al., she is concerned with situations where the aims and goals of the 'imported' curriculum, as well as the age and ability of the target group for which it was developed, 'match' those features in the 'new' geographical/cultural context.

She identifies three important and interrelated decisions which curriculum developers need to take when modifying materials:

(i) A 'strategy' decision which considers whether adaptation is the most appropriate strategy for curriculum development in a given situation.

(ii) A 'feasibility' decision which asks whether it is feasible to adapt that curriculum for use in that situation.

(iii) A 'refinement' decision which requires judgements about what modifications are necessary in order to adapt the given curriculum for use in that situation.

These decisions are interrelated because, in practice, the feasibility of adaptation depends upon the nature and extent of the necessary modifications and this, in turn, affects the decision as to whether adaptation is an appropriate development strategy.

The extent to which a curriculum, once appraised and selected for possible use in a 'new' geographical/cultural context, will be suitable depends on what Lutterodt terms its 'adaptedness'. The quality of 'adaptedness' is associated with characteristics of the curriculum itself and the extent to which these characteristics can be accommodated by, or made to 'fit' with, features of the 'new' context where it is to be implemented. These features, termed 'situation variables', are grouped under five main headings, viz.,

(i) educational structures

(ii) resources

(iii) environment

(iv) pupils

(v) goals.

Educational structures "concern the administrative framework within which instruction takes place" and include characteristics of the existing overall curriculum within the school system". Specifically, it includes items such as previous and existing courses in the subject, type of school, class size, duration and timing of classes. 'Resources' relates to material resources (space, equipment, books, etc.), to teachers' expertise and to ancillary and administrative support. 'Environment' refers to "factors in the surroundings, both physical and human, as these impinge on the child". These include the values, attitudes and ideas of the cultural context, as well as features of the natural or man-made environment (flora, fauna, local industries and technology). 'Pupils' refers to the knowledge, skills, attitudes, abilities and language of the pupils whilst 'goals' points to hoped-for achievements (knowledge, skills and abilities) as a result of studying the curriculum.

The curriculum selected for 'transplantation' into the 'new' context needs to accommodate itself to these 'situation variables' and this means, Lutterodt claims, its 'recasting' in varying degrees. Her analysis thus focuses on changes to the curriculum materials themselves and excludes the notion, put forward by Berman and McLaughlin (1976) of 'mutual adaptation' which involves not only "the adaptation of the initial design of the project" to fit the 'new' organizational setting but also adjustments to the organizational setting itself.

The extent to which the curriculum needs to be modified and can feasibly be modified depends upon its characteristics and the way in which these interact with the 'situation variables'. Here Lutterodt identifies four crucial variables, the first two of which relate to the

need for adaptation (i.e., the 'refinement' decision) and the second two of which concern the 'feasibility' decision:

(i) the 'demandingness' of a curriculum in terms of the resources required;

(ii) the 'universality' of the concepts used in the curriculum.

A curriculum which is 'low' in 'demandingness' is one which requires little in the way of specialized rooms and equipment and does not call for a high degree of experience and expertise on the part of the teaching staff. The concepts embodied in the curriculum may be 'universal', i.e., they may relate to the major theories of a (scientific) discipline or they may be 'specific', i.e., based on the life-experience of learners located in a particular geographical/cultural context. An elementary course designed for younger pupils will be more 'specific' and 'localized' and require a greater degree of adaptation than will a more academic curriculum designed for secondary pupils.

(iii) the 'flexibility' of the curriculum in terms of the extent of decision-making which rests with the user;

(iv) the 'interconnectedness' of the curriculum, i.e., the extent to which a curriculum is highly structured, with the different elements relating strongly to each other.

A flexible curriculum will allow the curriculum user to make choices as to whether to use all the modules/units, to decide how to sequence them and give scope for deciding whether or not to use all or only some of the learning activities on offer. A flexible curriculum will be low on 'interconnectedness' because it will allow the curriculum user to take certain decisions without upsetting the overall intellectual coherence and logic of the whole curriculum. The notion of 'interconnectedness' is however not merely the negation of flexibility, for the 'interconnected' curriculum demonstrates a higher degree of congruence "between its underlying goals and assumptions and their concrete embodiment in

particular learning objectives and learning experiences". The greater the 'interconnectedness' of a curriculum, the less feasible it is to modify it, even though 'interconnectedness' may justifiably be seen as the hallmark of a well-planned curriculum.

The size of the modifications which may need to be carried out on the curriculum will have a bearing on the 'feasibility' decision. If the required changes concern, e.g., the structure and organization of subject content, its underlying assumptions and philosophy or its course objectives, such changes would be too 'fundamental' to make adaptation viable because the essential coherence of the curriculum would be lost. Less substantial ('intermediate') changes are acceptable, such as the introduction of a new unit which might affect the course objectives, so long as they remain few in number and do not threaten the overall integrity of the materials (the extent to which this is possible will depend on the degree of 'interconnectedness'). Minor ('detailed') modifications, such as changes in level of reading difficulty, are also acceptable.

Lutterodt's (1980) contribution is necessarily located within a conceptual framework which has been designed to accommodate the phenomenon of 'cultural transplantation' from one geographical/cultural context to another, and her concept of 'adaptedness' (or 'adaptability') necessarily presupposes that no significant differences exist between "Context I" (for which the materials were initially designed) and "Context II" (where the materials are to be applied). Given the nature of this conceptualization, the analysis she provides nevertheless offers insights into the characteristics which can be associated with curricula such as their 'pliability' or 'modifiability' in terms of the way they are structured, and the extent to which disturbance of this structure will

have a bearing on the feasibility of considering adaptation. Although her focus is on the interaction between 'curriculum variables' in the 'existing' materials and 'situation variables' in the 'new' context, rather than on the appraisal and the selection of curricula, it points implicitly to the way in which, at the appraisal stage, curriculum variables might be analysed for 'modifiability' based on worked-out criteria. Also useful is the assumption that the nature and size of the modifications to be undertaken will define the feasibility of adaptation and its appropriateness as a curriculum development strategy.

Section 2.5: Evaluation and general conclusions

This examination of the literature relating to adaptive curriculum work has revealed that the majority of accounts are associated with the 'cultural transplantation' notion of the 1970s, (viz., curriculum 'export'/'import' between countries, cultures, societies and languages). Writers who have been involved in such 'transplantation' activities have necessarily developed their conceptualizations of the nature of adoption/adaptation and the activities to be associated with it within that particular framework. Consequently, they have, in the main, devoted their thinking to issues which arise when the perceived educational needs of a particular target group in relation to a particular subject area are 'matched' with an apparently appropriate curriculum 'imported' from elsewhere. In this situation, there is general congruence between key curriculum variables in the 'imported' curriculum (aims, objectives, content, instructional approaches, age and ability of students) and those sought for in the programme for the 'new' setting. As a consequence of this, differences in geography, culture, resourcing levels, etc., will require that modifications, to a greater or lesser extent, be made to the materials. However, such modifications

are conducted within the philosophical and educational parameters of the 'original' curriculum in a way which neither distorts nor disturbs the structure and intellectual coherence of the materials, nor changes, in any fundamental way, the key curriculum variables.

The contributions of theorists writing within this 'cultural transplantation' tradition have to be appraised against this particular background of concerns. Many of the documented accounts emanating from this particular area are of a predominantly descriptive nature and portray adaptive activities, described through case-study material, which arise in response to the pragmatic problems of implementing culture-specific materials in a changed cultural setting. They do not pretend to address theoretical issues concerning the nature of adaptive work or give detailed attention to the procedures associated with the modification of materials. Thus, they make no attempt to generalize beyond their immediate experience or offer recommendations to other workers wishing to develop curricula through adaptive means.

Other writers in the 'cultural transplantation' tradition however, have recognized the a-theoretical nature of much of the documented material and the need to provide curriculum workers with help and guidance which has a theoretical underpinning. Of particular note, in this context, are the contributions of Bloch, Blum and his colleagues, and Lutterodt. These writers have offered definitions of the concepts and have sought to identify decisions and activities which are typically carried out in association with adaptive work. Whilst they use terminology in rather different ways, and place differential emphasis on the various activities to be associated with this work, they nevertheless usefully highlight a number of issues which merit consideration. These concern

(i) the identification of 'usage conditions' of 'existing' materials;

(ii) the identification of 'usage conditions' required in the 'new' context;

(iii) the scrutiny of catalogues, directories and compilations describing 'existing' materials;

(iv) the selection of 'existing' materials for use in the 'new' context;

(v) the identification of curriculum variables in the 'existing' materials;

(vi) decision-making about the feasibility of modifying the 'existing' materials;

(vii) the evaluation of procedures for the modification of the 'existing' materials;

(viii) the evaluation of the 'adapted' product.

The relative focus of Bloch, Blum et al., and Lutterodt, respectively, is summarized, for the purpose of comparative analysis, by Table 2.1 overleaf.

Combining the different concerns of these theorists in this way gives rise to a useful checklist of issues which may form the background to a process of curriculum appraisal and analysis. Such a checklist may be seen to have certain characteristics in common with the curriculum schemes of Eraut et al. (1975) (referred to earlier). These schemes attempt to identify questions which should be borne in mind when choosing between curricula for the purposes of implementation, and to point up the implications of taking particular decisions in this selection process.

Table 2.1: Stages of adaptation discussed by Bloch (1978), Blum et al. (1979) and Lutterodt (1980)

Area of concern	Bloch	Blum et al.	Lutterodt
Identifying usage conditions of 'existing' materials	x	x	x
Identifying usage conditions in the 'new' context	x	x	x
Scrutinizing information (in catalogues etc.) about 'existing' materials	-	x	-
Selecting 'existing' materials for use in 'new' context	x	x	-
Identifying curriculum variables in 'existing' materials	x	x	x
Judging the feasibility of modifying 'existing' materials	-	-	x
Evaluating procedures for modifying 'existing' materials	-	-	-
Evaluating the 'adapted' product	x	x	-

The checklist which may be compiled on the basis of the combined contributions of Bloch (1978), Blum et al. (1979) and Lutterodt (1980) specifically emphasises the need to understand the content, structure and defining characteristics of the curriculum being considered for adaptation, as well as features in the 'new' learning environment, both in terms of educational opportunities and of constraints. This offers a far clearer picture, than that contained in the case-study material emanating from other 'cultural transplantation' writers, about the issues which adaptive curriculum work raises concerning the nature of decision-making and the characteristics of its associated activities. Nevertheless, a number of reservations need to be made about these contributions:

(i) They conceptualize adaptive curriculum work only within a 'cultural transplantation' framework. This effectively limits the potential of such work because it fails to acknowledge that possibilities may exist outside this particular set of concerns.

(ii) The work focuses predominantly on the adaptation of whole curricula, or coherent 'part-curricula'. Blum's ideas about the extension of this conceptualization to include the generation of new programmes/courses by drawing upon a variety of 'part-curricula', are not fully explored.

(iii) A detailed account of how people might actually carry out any necesssary modifications is not offered. Thus, as such, no comprehensive working model is offered of the activities and procedures to be associated with adaptation which can be used in any operational way.

Outside the 'cultural transplantation' tradition, the remaining literature is dominated by contributions from writers at the Open University -

notably Rogers and her colleagues. Their accounts concern different ways in which learning resource materials (produced by their Community Education Section) may be used. The main purpose of such accounts is to demonstrate that self-study student materials, developed on a topic, issue or theme basis, may be used in a wide variety of teaching and learning situations. In contrast to the writers from the 'cultural transplantation' school who have emphasised the desirable congruence of key curriculum variables between the 'existing' and the intended curriculum in its 'new' setting, Rogers (1982; 1983; 1984), in particular, suggests that 'adaptation' may be associated with situations where 'curriculum variables' are not all 'matched'. The flexibility and lack of 'interconnectedness' in topic-based material quite obviously opens up the possibility of the materials being used directly, or after modification, or in conjunction with additions of ab initio developed material with different learning environments, with a range of different instructional approaches and for a range of different purposes.

Rogers and colleagues such as Calder, Shields and Ballard (1984), Ballard (1984) and Sayer and Jones (1984), thus view 'adaptation' in the context of the 'alternative use' of materials and, in this sense, their concerns are of a very different nature to those of the 'cultural transplantation' school. The value of their contribution lies in the way in which they draw attention to possibilities for adaptive curriculum work which lie outside the 'cultural transplantation' framework. In so doing, they shift the emphasis of adaptation associated with implementation issues towards the notion of adaptation as a strategy for the development of what are essentially 'new' programmes courses/curricula. Unfortunately, the contribution made by the Open University writers, in the main, does not provide a theoretical model to make operationally viable this range of possibilities for adaptive work.

Moreover, the mainly descriptive case-study material from this source does little more than to register incidence of this type of work. The exception to this general tendency is in the work published in relation to the Leverhulme Project where Rogers (1982) tries to abstract some general principles relating to adaptive work from a large body of empirical data relating to actual adaptation attempts. However, this account suffers from methodological inadequacy because of the absence of any guiding theory in the conduct of the research. This limits, in operational terms, the usefulness of Rogers' report.

In appraising the usefulness of the contributions from writers within the 'cultural transplantation' tradition and from the Open University, it needs to be emphasised that the central concern of this study is not with curriculum implementation issues but with issues that are raised when 'new' materials are generated from 'existing' materials to respond to curriculum/programme needs. This effectively shifts the focus of interest in adaptive curriculum activity to its potential as a strategy for curriculum development. If one then considers the suggestion made in Chapter 1 of the possible use of 'existing', school-oriented materials in the FE sector, one is not referring to a situation where the education system is 'roughly comparable' (which is the predominant concern of writers in the 'cultural transplantation' tradition) but, in fact, substantially different. Moreover, the 'transplantation' of materials from the school to the FE sector subsumes a potentially large number of 'transfer' patterns. These may be demonstrated by considering the following examples which might conceivably arise:

(i) the use of general education materials in Vocational Preparation courses;

(ii) the use of self-study materials for discussion-based group work;

(iii) the use of 'academic', didactic material for practical work-shop sessions.

In these examples, consideration would need to be given to the implications of difference with respect to some or all of the variables (mentioned earlier in the section) which were mainly held 'constant' within the 'cultural transplantation' model, viz., the age and ability of the target group, the educational intentions, the content and its organization and the teaching approaches.

Writers from the Open University whose conceptualization of adaptive curriculum work shares similarities with that which underpins this study, have indicated their awareness of the large number of 'transfer' patterns which might be anticipated. However, they have not developed a body of theory which clarifies and articulates these ideas. It must therefore be concluded that

(i) the available literature does not offer an appropriate model for the analysis of adaptive curriculum work in FE, although Bloch (1978), Blum and his colleages (1979) and Lutterodt (1980) provide useful insights;

(ii) there is a need to develop a theoretical framework which is predicated upon a systematic analysis of the various decisions, procedures and activities associated with adaptive work as a strategy for curriculum development.

The following chapter is devoted to the development and presentation of such a framework which attempts to realize these intentions.

CHAPTER 3: A MODEL FOR ADAPTIVE CURRICULUM DEVELOPMENT WORK

Section 3.0: Introduction

The central premise adopted here is that curriculum development is, or should be, a purposive activity, informed by sound judgements and based on rational decision-making. This is a fundamental tenet which ought to guide development work of any kind, whether by ab initio or by adaptive methods. Whichever strategy or route is used, there needs to be a clear identification and articulation of educational intentions relating to a specified target group and a carefully considered, systematic 'translation' of these intentions into teaching and learning programmes. This gives rise to a number of well-recognized tasks, e.g., the selection of curriculum content, the choice of teaching methods and learning activities, and the identification of issues associated with the implementation of the curriculum/programme.

It is important, however, to distinguish tasks which are common to all curriculum development activities from those which are specific to adaptive work. The former have already been the subject of numerous publications in the area of curriculum theory and practice: it is the latter which, on the strength of the evidence provided by the literature review, need to be examined. The discussion in this chapter therefore does not cover those issues general to all curriculum developments, but seeks to provide a rational analysis of the various decisions, activities and procedures which are exclusive to adaptive work as a strategy for curriculum development.

In order to locate adaptive curriculum activity in some kind of context, the circumstances of its use, or at least the consideration of its use, need to be examined. The first two sections of this chapter therefore explain the conditions and activities which ought to shape decisions culminating in the acceptance - or rejection - of adaptive work as a means of generating materials for a 'new' curriculum/programme. As such, they provide a 'framework' for decision-making with respect to the appropriate strategy to use for a given set of circumstances.

Subsequent sections of this chapter investigate in depth, from a theoretical perspective, major decisions and associated activities which feature adaptive work per se. Once again, the central assumption is that adaptive work, if it is to be successful, needs to be conducted within a set of rigorous, well-defined parameters, constructed according to principles of rational decision-making. Thus, these sections attempt to identify a sequence of 'key' questions which necessarily arise in the conduct of adaptive work and the implications, in terms of action, of the decisions which may be made.

The model to be developed and presented here serves two important functions. Firstly, it attempts to compensate for the absence, in the available literature, of any serious consideration of adaptive work as a strategy for curriculum development and of any systematic analysis of the decision-making issues which this involves. Secondly, the model informs the theoretical 'framework' within which the analysis of actual instances of adaptive work is carried out. The conduct of the analysis and the findings thereof are reported in Chapters 6 and 7 of this study.

Section 3.1: Pre-conditions for adaptive curriculum development

The choice of a curriculum development strategy arises, in the first instance, at that point in the innovation process where the intentions of the educator are put into operation through the development of teaching/learning programmes. In theoretical terms, this choice is between ab initio development or adaptive activity as a means of generating 'new' materials. If, at this point, adaptive activity is to be considered, a number of important pre-conditions need to be fulfilled. These may be broadly grouped into two categories, viz.,

(i) those relating to characteristics of the curriculum developer;

(ii) those relating to factors associated with the 'existing' materials.

These pre-conditions for adaptive curriculum work will now be explained and discussed.

The first and most obvious pre-requisite for any consideration of adaptive curriculum development is the recognition, on the part of the curriculum developer, that 'new' materials may be generated by using 'existing' materials. If he/she is unaware that a realistic alternative to ab initio is available, and that this alternative presents itself for consideration in relation to the curriculum development task, the possibility of conducting adaptive work, or indeed, the possibility of choice between ab initio development and adaptive work for responding to 'new' curriculum/programme needs, does not arise. Therefore, if adaptive work is to be considered as a strategy for curriculum development and not effectively excluded as a decision-making issue, it follows that the curriculum developer's perception of 'curriculum development' is not solely in terms of ab initio development, but additionally embraces some kind of familiarity with the notion of

adaptive curriculum development.

It is possible that a curriculum developer is aware that a choice between ab initio and adaptive curriculum development exists at a theoretical level, but, nevertheless, takes up an a priori position to engage in ab initio development. This may, of course, be as a result of some 'external' pressure to develop 'new' curriculum/programme materials on an ab initio basis, as, for example, in a situation where an authority figure (such as a Head of Department) makes this particular stipulation. However, information supplied by Rogers (1983) implies that an a priori commitment to ab initio development may be attributable to a curriculum developer's perception of adaptive work as somehow inherently inferior to ab initio development as a strategy for generating 'new' materials, or as a means of facilitating tasks which ought to be experienced as 'difficult'. She asserts that some educators consider the use of pre-prepared materials to amount to 'cheating' and that this practice may be avoided in order to express 'competence'. She states that using 'existing' materials

> "...implies you are either too lazy or too incompetent to design suitable exercises for yourself. Often when people admit to using pre-specified items, they excuse themselves by stressing that they are under time pressure or do not have the resources to do the job properly. The point is that, for a fair proportion of the people talked to, the use of materials like this is seen to be inherently 'second best' ". (Rogers, 1983, p.53)

If curriculum developers' image of themselves as 'competent professionals' or as 'innovators' is indeed associated with ab initio development, this clearly precludes any consideration of adaptive work. However, the essential point here is that it is theoretically conceivable that curriculum developers may, for whatever reason, adopt an a priori position in relation to the curriculum development task which is not favourable towards the use of 'existing' materials. Therefore, a pre-condition for adaptive work is a positive attitude, on the part of

the curriculum developer, towards this particular strategy.

A realistic consideration of the use of 'existing' materials to meet new curriculum/programme requirements is dependent upon the understanding of the curriculum developer of what materials have already been developed by others. Knowledge about 'existing' materials may already be present in some form, as part of the curriculum developer's professional 'stock-in-trade', although it will obviously vary in its extent and in its depth. The knowledge may be restricted to particular materials previously used in teaching other courses/programmes and may be very detailed or be no more than a passing acquaintance with one or two characteristic features. The pre-condition relating to a curriculum developer's knowledge of 'existing' materials is satisfactorily fulfilled only when this knowledge extends to a range of materials, because informed decision-making about the use or possible use of 'existing' materials is dependent upon the spectrum of choices being suitably wide.

Finally, there are two pre-conditions relating to the 'existing' materials which need to be satisfied before adaptive work should be considered. These relate to their accessibility and their availability. When conducting adaptive work, it is important that the curriculum developer can gain ready access to the materials being chosen, or being considered, and that there are no, or only minimal, restrictions operating on their use. This is because the curriculum developer needs to have 'existing' materials in his/her possession for what may be an extended period of time, particularly if the materials are to undergo substantial modification. Problems such as unfavourable conditions of access and availability can effectively militate against the realistic consideration of adaptive activity and therefore need to be carefully

appraised before considering adaptive work.

The above discussion points to the importance of four pre-conditions which ought to be satisfied if adaptive work is to be regarded as a possible means of responding to 'new' curriculum/programme needs, viz.,

(i) familiarity with the notion of adaptive curriculum development;

(ii) a positive attitude towards the use of adaptive work;

(iii) knowledge of a range of 'existing' materials;

(iv) ready access to, and availability of, 'existing' materials.

However, if pre-conditions (i) and (ii) are not met, the possibility of using adaptive curriculum development does not arise; if pre-conditions (iii) and (iv) are not satisfied, the possibility of adaptive work should not be entertained. Therefore, a failure to meet one or more of the pre-conditions listed above results in the selection, either by 'default', or as an informed decision, of ab initio development. In this way, assumptions, perceptions and constraints which are unfavourable to adaptive activity may operate on the choice of the curriculum development strategy at an early stage of the innovation process, and act to prevent the establishment of the appropriate parameters (or 'boundary conditions') for adaptive work.

Section 3.2: Subsequent decision-making in relation to adaptive curriculum development

The satisfaction of the necessary pre-conditions allows the curriculum developer to consider whether there are 'existing' materials which might meet his/her requirements for the 'new' curriculum/programme. This involves two related activites:

(i) the identification of materials which may be considered for possible use;

(ii) the appraisal of these materials in terms of their suitability.

The nature and conduct of these activities is examined in some depth in the following section of this chapter. At this point, however, it should be noted that the suitability of materials is appraised in terms of the extent to which they are perceived as compatible with the educational intentions for the 'new' curriculum/programme. It is therefore essential that the curriculum developer has a clear view of these intentions and is able to make informed judgements about whether there is rough comparability between the 'existing' materials and those to be generated.

Two different decisions are possible following the identification and initial screening of 'existing' materials:

(i) the materials are inappropriate for the new curriculum/programme and should be rejected;

(ii) the materials appear suitable and should be retained for consideration.

The curriculum developer who judges that the 'existing' materials which he/she has chosen are incompatible with the educational intentions for the 'new' requirement will, at this point, abandon the idea of adaptive work and generate the 'new' materials through ab initio development. On the other hand, if the materials seem to 'match' the 'new' requirement, the curriculum developer should carry out a more detailed scrutiny which serves two functions, viz.,

(i) checks the overall suitability of the chosen materials for use in the 'new' curriculum/programme;

(ii) identifies any areas or aspects of the chosen materials where there is evidence of some lack of compatibility with the educational intentions for the 'new' materials.

The following section of this chapter explains how this more extensive examination of the chosen materials ought to be conducted. However, it should be noted that if the curriculum developer considers that a good 'match' exists between the 'existing' materials and those to be developed, he/she will decide that the materials chosen for adaptive work can be used directly, i.e., without modification. This effectively identifies ADOPTION as the appropriate curriculum development strategy. It is therefore at this point that ADOPTION makes its first appearance in the decision-making framework.

The appraisal may however indicate that, whilst the chosen materials are still, on balance, considered to be suitable, there are, nevertheless, areas/aspects of 'mismatch' in relation to the 'new' materials. This indicates the need to undertake modifications to render the 'existing' materials suitable for use in the 'new' curriculum/programme. At this point, two possibilities for eliminating the perceived 'mismatch' present themselves:

(i) the 'mismatch' may be remedied by making adjustments to the 'new' requirement;

(ii) the 'mismatch' may be corrected by carrying out appropriate modifications to the 'existing' materials.

Option (i) above may, under certain circumstances, be feasible. The curriculum developer should, as stated earlier, have a clear conception of the nature and characteristics of the materials to be developed and it may be possible to introduce changes into this specification without compromising its educational intentions. However, situations may arise where a set of 'existing' materials, which is chosen for use in the new curriculum/programme, imply or recommend conditions of implementation (such as a requirement for the use of a laboratory, or teaching

sessions of a particular duration or a particular pattern of attendance) which are not immediately compatible with the conditions of implementation envisaged for the 'new' curriculum/programme. Nevertheless, changes may be made at the institutional level which overcome such difficulties. In the case of the requirement for the use of a laboratory, for instance, it may be possible to identify an alternative way of achieving those learning outcomes associated with practical laboratory-based work (e.g., by showing in the classroom, filmed or tape-slide sequences of such work). In situations such as these, adjustments to the 'existing' materials are avoided by manipulating the context in which the 'new' materials are to be implemented. Thus, the 'existing' materials are used directly in the 'new' curriculum/programme and ADOPTION is the strategy for curriculum development.

'Mismatch' is more usually remedied by conducting modifications to the 'existing' materials, i.e., through ADAPTATION, than by manipulating aspects of the 'implementing' context (although it is theoretically conceivable that situations may occur which require modifications to be conducted both to the 'implementing' context and to the 'existing' materials). However, before ADAPTATION is finally decided upon as the strategy for curriculum development, the curriculum developer needs to have a clear and detailed understanding of the nature of the 'mismatch' that he/she has identified in the 'existing' materials and the direction which the modifications need to take in order to remove the 'mismatch'. The appraisal of this aspect then allows the curriculum developer to determine the scale and demands of the adaptation task and to decide whether the adaptation is feasible and manageable.

The judgement relating to the feasibility of undertaking the adaptation needs to consider both theoretical and pragmatic issues. From a theoretical point of view, the adaptation is feasible if it can reasonably be assumed or envisaged that the 'adapted' product will successfully achieve its stated educational intentions. However, in order to decide whether, in practice, the adaptation is manageable, the curriculum developer needs to consider the constraints which operate, or may operate, in the institution where the 'new' curriculum/programme is to be offered. Issues for consideration are, e.g., how much time is available for the adaptation exercise, what level of curriculum experience and expertise is available and, importantly, whether the pressure on available resources (human and material) will be heavier or lighter than for a response involving ab initio development.

At this point, the decision may be taken against engaging in adaptive work after all, but instead to generate 'new' material through ab initio development. This may arise, e.g., in situations where the materials have certain qualities which make it overly difficult to carry out modifications or where the curriculum developer decides, after carefully weighing up the nature of the adaptation task, that his/her educational intentions may be more effectively realized by this strategy. Alternatively, it may occur when adaptive work makes demands on resources which are far in excess of those which would otherwise be made by ab initio development. However, it may be that despite any theoretical or practical difficulties involved in pursuing the ADAPTATION 'route', a judgement is made to carry out the necessary modifications. The curriculum developer may, for instance, perceive that the quality of the 'existing' materials (e.g., in terms of their intellectual integrity or visual presentation) surpasses that of any curriculum product which he/he could generate through ab initio

development (perhaps in the light of limited resources in the institution - equipment, time, financial support - at his/her disposal). Thus, whatever the criteria used to justify the decision to carry out the necessary modifications, it is at this point in the decision-making sequence that ADAPTATION as the strategy for curriculum development is finalised.

The concern of this chapter so far has been to present and explain a decision-making framework which, through the application of rational principles, demonstrates the conditions under which (i) ADOPTION, (ii) ADAPTATION and (iii) AB INITIO DEVELOPMENT are selected for the purpose of generating 'new' curriculum/programme materials. The first section of the chapter identified four pre-conditions which should be satisfied before adaptive work is considered as a possible strategy for curriculum development. Then, having established the appropriate parameters for adaptive work, the second section identified the issues which present themselves for consideration to the curriculum developer and the various decision routes which are logically linked to the judgements he/she makes.

The decision-making framework is set out in Figure 3.1 (overleaf) and presents, in the form of questions, the issues which curriculum developers need to raise when choosing a strategy for curriculum development. It will be noted that certain 'key' questions have been highlighted in the flow-chart viz.,

1. Is curriculum adoption/adaptation regarded as a possible means of responding to the 'new' curriculum/programme need?
2. Are these materials suitable for possible adoption/adaptation?
3. Is 'mismatch' in evidence?
4. Can the 'mismatch' be remedied by modifying features of the

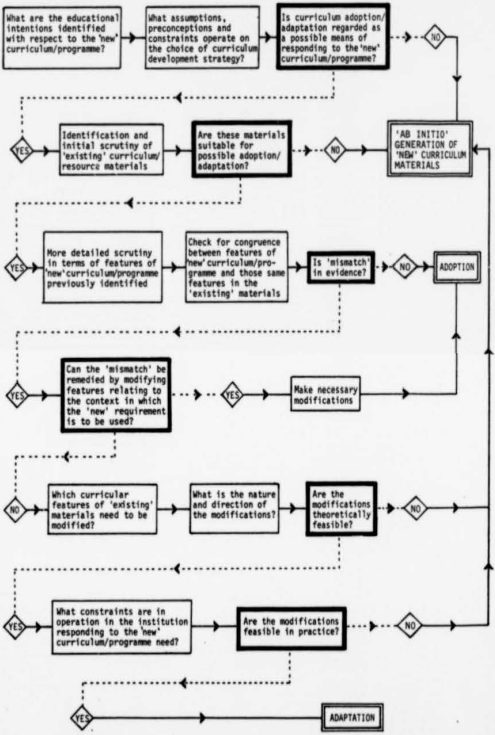


Figure 3.1: Flow-chart indicating decision-making in relation to the curriculum development strategy.

context in which the 'new' requirement is to be used?

5. Are the modifications theoretically feasible?

6. Are the modifications feasible in practice?

These 'key' questions may be broadly grouped in terms of their concerns:

(i) the pre-conditions for adaptive work (Question 1);

(ii) the suitability of the materials being considered for possible use, either by means of (a) ADOPTION or (b) ADAPTATION (Questions 2, 3 and 4);

(iii) the feasibility of conducting the necessary modifications, i.e., of choosing ADAPTATION (Questions 5 and 6).

Thus, in demonstrating how judgements should be made about the choice of the curriculum development strategy, the decision-making framework highlights the two major decisions to be associated with the conduct of adaptive work per se, viz., the 'suitability' decision (ii above) and the 'feasibility' decision (iii above). The following sections of this chapter explore in detail the issues which have a bearing on the 'suitability' and 'feasibility' of 'existing' materials and explain the activities and procedures which need to be undertaken in order to reach these decisions.

Section 3.3: The appraisal of materials

Fundamental to the decisions about the suitability of 'existing' materials for adaptive work and the feasibility of carrying out the required modification is the appraisal of materials. In the case of ADAPTATION, these decisions are, quite clearly, interlinked and sequential. The question of feasibility arises once it is established that the 'existing' materials are, in the broadest sense, suitable for consideration but that they require alterations before they can be used in the 'new' situation.

In the case of ADOPTION, the question of feasibility does not arise because here, no modifications are necessary. The issue of suitability is however linked to both ADOPTION and ADAPTATION in the sense that the decision taken about suitability will lead either in the direction of ADOPTION or in the direction of ADAPTATION.

The curriculum developer who engages in the possibility of carrying out adaptive curriculum work will, therefore, from a rational point of view, need to examine 'existing' material in order to arrive at a reasoned judgement about suitability. As indicated in Section 3.2, this examination is a two-step process, viz.,

(i) an initial scrutiny of 'existing' materials at the 'exploration' stage to determine what materials are available for possible adaptive work;

(ii) a detailed analysis and evaluation of materials chosen at the 'exploration' stage to confirm their suitability for the 'new' requirement.

In the case of ADAPTATION, the processes identified in (ii) above also establish the basis for judgements concerning the feasibility issue. To be effective, it is recommended that the appraisal of materials is organized on the basis of pre-determined criteria which allow a systematic comparison to be made between the materials being considered for adaptive work with the specification for the 'new' curriculum/programme.

Section 3.3.1: Criteria of comparison

The criteria of comparison offered here concern two major dimensions, viz.,

1. The features/characteristics desired in the 'new' materials, and

the features manifest in the 'existing' materials.

2. Conditions relating to the 'setting' in which the 'new' materials are to be used, compared with those in the 'setting' intended by the developer(s) of the 'original' materials.

These dimensions reflect the concerns of a curriculum developer who wishes to plan and design a set of materials. He/she will need to make decisions about the nature of the materials themselves - the educational intentions they are to achieve, the target group for which they are intended, their educational content and so on - and these decisions will affect the form, format and presentation of the materials. However, the curriculum developer will also have in mind, during the planning and design phases of the innovation process, a particular set of conditions in relation to the context in which the materials will be implemented. If, for instance, his/her educational intentions relate to the development of certain practical skills on the part of the target population, this may well imply specialist rooms, equipment and technician assistance in the institution using the materials, as well as teaching/learning periods of a particular length. In this sense, features/characteristics of a set of materials reflect an attempt, on the part of the curriculum developer, to realize certain educational intentions in relation to a defined 'implementing' context. The appraisal which lies at the heart of a number of crucial phases of adaptive work *per se* necessarily, therefore, implies the analysis and evaluation of dimensions 1. and 2. outlined above.

The features/characteristics referred to in 1. above will be termed 'curricular features'. These may be elaborated as follows:

(i) The type and nature of the materials. They may be, e.g., curriculum or resource materials and may be aimed at the teacher (teaching materials) or at the learner (learning

materials). (The significance of different types of material in adaptive work is discussed in Section 3.4.)

(ii) The characteristics of the target population. These describe, e.g., its age, ability range, prior knowledge and experience.

(iii) The nature of the educational content. This concerns items to be included from within a broad subject/study area.

(iv) The organization and sequencing of the educational content. This relates to the way in which the selected content items are presented to the learner, e.g, through an approach which emphasises concepts and/or modes of inquiry characteristic of a particular subject area, or in terms of topics, themes, issues or problems which bring together aspects of different subject areas. It also identifies the order in which different content items should be presented.

(v) The educational intentions and desired learning outcomes of the curriculum/programme.

(vi) The nature of the teaching approach and learning experiences. This concerns the methods used to expose the learner to the educational content chosen to achieve the desired intentions and learning outcomes, e.g., through expository teaching, experential learning, self-study. Also important here is an identification of pedagogical actions to be undertaken by the educator and the nature of the role-relationships between tutor and student.

The features/characteristics implied in 2. above will be referred to as 'contextual features'. These may be subject to some variation, depending upon local conditions. Generally, however, they relate to the following:

(i) Time and its organization. This concerns the duration and timing of the course, and the length of its teaching/learning sessions. Implicit here are 'internal' constraints imposed by the institution through, e.g., its timetabling practices, and 'external' constraints imposed by sponsoring bodies or employers in connection with the release of students.

(ii) Resource requirements, particularly in terms of special facilities, equipment, technical and secretarial support, etc.

Section 3.3.2: An aid for the appraisal of materials

It is suggested that the curricular and contextual features identified in the previous sub-section are used for comparing the materials being considered for adaptive work with the specification for the 'new' curriculum/programme. In general terms, the appraisal involves the following steps:

Step 1: The identification and recording of information relating to the 'existing' materials.

Step 2: The identification and recording of relevant information about the corresponding features of the materials to be developed.

Step 3: The comparative analysis of both sets of information in terms of (a) degrees of 'match' and 'mismatch' and (b) actions necessary to remedy 'mismatch', where applicable.

The tasks of identifying, recording and analysing the information may be greatly facilitated by constructing what may be referred to as a 'match/mismatch' matrix. This is a 'tool' which can be used for comparing, in a systematic manner, the curricular and contextual features of the 'existing' and the 'desired' materials. It effectively collates the necessary information and allows the curriculum developer to

(i) decide upon the suitability of the 'existing' materials for either ADOPTION or ADAPTATION purposes;

(ii) identify the locus or loci of any modifications that are required;

(iii) appraise the nature of these modifications and hence the feasibility of carrying them out.

It is suggested that the categories to be included in the matrix are derived from the curricular and contextual features identified in 3.3.1 above. These will be as follows:

1. Type and nature of material
2. Target population (age level, ability range, other relevant characteristics)
3. Subject/study area and its content
4. Organization and sequencing of content
5. Learning outcomes (goals and/or objectives)
6. Teaching approach(es) and type(s) of learning experience
7. Teaching time requirement and its organization
8. Resource requirements (technical, secretarial, physical space, materials, facilities, etc.)

These categories are then inserted in the matrix in relation to the two dimensions associated with the materials - 'existing' and 'desired'. Table 3.1 (overleaf) demonstrates the lay-out of a 'match/mismatch' matrix.

Table 3.1: A sample 'match/mismatch' matrix

	NAME AND TYPE OF MATERIAL	TARGET POPULATION - Age level - Ability range - Other relevant characteristics	SUBJECT/STUDY AREA AND ITS CONTENT	ORGANIZATION AND SEQUENCING OF CONTENT	LEARNING OUTCOMES (goals, objectives)	TEACHING APPROACH(ES) /TYPE(S) of LEARNING EXPERIENCE	TEACHING TIME REQUIREMENT AND ITS ORGANIZATION	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.)
CHARACTERISTICS AND CONDITIONS OF 'EXISTING' MATERIALS								
CHARACTERISTICS AND CONDITIONS OF 'NEW' REQUIREMENT								
OBSERVATIONS ON 'MATCH/MISMATCH' AND ACTION TO BE TAKEN (WHERE NECESSARY)								

The curriculum developer who uses a matrix of this type will analyse the 'existing' materials in terms of each of the eight categories appearing in the matrix. This involves considering each curricular and contextual feature in turn, making judgements about its nature and carefully recording this information along the appropriate dimension of the matrix. This procedure is subsequently repeated with respect to the materials which are to be developed. These two sets of information are then compared and systematically analysed. The third column on the left-hand axis allows the curriculum developer to record the results of this analysis and to note the actions which need to be taken to remedy 'mismatch', where applicable.

Table 3.2 overleaf demonstrates a worked example of the 'match/mismatch' matrix. It is based on information relating to one of the case-studies to be analysed in Chapter 6 of this study. This information has, however, been adapted to demonstrate the application of the 'match/mismatch' matrix and is not a reflection of the decisions and actions which were actually taken by the curriculum developer featured in the case-study.

In this example, a high degree of 'match' is in evidence between the 'existing' materials and those to be developed. In this situation, the curriculum developer will, from a rational point of view, decide that the materials are suitable for adaptive work. However, the matrix indicates that some 'mismatch' exists in relation to the orientation and interests of

Table 3.2: Worked example of 'match / mismatch' matrix

	NAME and TYPE of MATERIAL	TARGET POPULATION - Age level - Ability range - Other relevant characteristics	SUBJECT/STUDY AREA and its CONTENT	ORGANIZATION and SEQUENCING of CONTENT
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS	Components of 'Science in Society', project funded by Association for Science Education (ASE) consisting of (i) Teachers' handbook (ii) Student resource materials: information booklets, data collections, films.	16-20 year olds, but mainly VI formers and FE students following General Studies programme.	Broad area: Science and Technology. Specific area: role and implications of science and technology in modern society. Integrated content involving synthesis of aspects of science, technology and social sciences.	Organization broadly defined in terms of topic areas. Sequencing: flexible.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT	Student resource materials: worksheets and data exercises.	Adults, medium/high ability, varied backgrounds and work/educational experience, vocationally committed.	Broad area: Science and Technology Specific area: impact of scientific thought and technological advance on society and social processes, with particular reference to information technology.	Organization broadly defined in terms of topic areas.
OBSERVATIONS on 'MATCH / MISMATCH' and ACTIONS to be TAKEN	'Match' in evidence. Need to make relevant selections from 'existing' student resource material.	Broad 'match' with respect to age level and ability range. 'Mismatch' in relation to orientation. Need to increase vocational relevance of materials and reduce orientation towards general education.	Broad 'match'. However, need to introduce more content relating to information technology.	'Match' in evidence in relation to organization of content. 'Match' implied in relation to sequencing of content.

Notes relating to terms used in the matrix:
(i) 'Flexible' indicates that the 'original' curriculum developer has allowed the 'user' to make decisions with respect to the particular feature.
(ii) 'Broadly defined' indicates that the 'original' curriculum developer had made certain recommendations with respect to the particular feature but had accorded, to the 'user', some degree of interpretation and choice.
(iii) 'Match implied' indicates that, in the absence of any recommendations laid down by the 'original' curriculum developer with respect to the particular feature, 'mismatch' as an issue could not arise and therefore 'match' is implied.

Table 3.2: Worked example of 'match/mismatch' matrix (continued)

	LEARNING OUTCOMES (GOALS and/or OBJECTIVES)	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE	TEACHING TIME REQUIREMENT and its ORGANIZATION	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.)
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS	Broadly defined, relating to: (i) awareness of the nature of science and technology; (ii) a questioning attitude to the opinion of 'experts'; (iii) an understanding of the role and impact of science and technology on society; (iv) an understanding of the constraints on scientists in their decision-making.	Flexible	Flexible	Flexible
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT	To gain an enhanced understanding of the role of science and technology in society, with particular reference to information technology.	Some expository teaching (e.g., classroom lectures) but predominantly group and individual work, particularly discussion, project work, private study, visits/experiential learning.	3 hours per week over 26 weeks.	Library facilities: microfiche and computerized catalogue system.
OBSERVATIONS on 'MATCH / MISMATCH' and ACTIONS to be TAKEN	Broad 'match' in evidence. No actions necessary.	'Match' implied. No actions necessary.	'Match' implied. No actions necessary.	'Match' implied. No actions necessary.

Notes relating to terms used in the matrix:
(i) 'Flexible' indicates that the 'original' curriculum developer has allowed the 'user' to make decisions with respect to the particular feature.
(ii) 'Broadly defined' indicates that the 'original' curriculum developer had made certain recommendations with respect to the particular feature but had accorded, to the 'user', some degree of interpretation and choice.
(iii) 'Match implied' indicates that, in the absence of any recommendations laid down by the 'original' curriculum developer with respect to the particular feature, 'mismatch' as an issue could not arise and therefore 'match' is implied.

the 'new' target population and also, to some extent, with respect to the subject/study area and to the learning outcomes. Modifications will therefore need to be conducted in order to

(i) render the 'existing' materials more appropriate for a vocationally committed target population;

(ii) introduce more emphasis on the impact of information technology on society.

At this stage of decision-making, the feasibility of adapting the 'Science in Society' materials becomes an important issue and one which has to be carefully appraised by the curriculum developer, taking into consideration the theoretical and practical considerations referred to in Section 3.2. In general terms, if the modifications signalled in the matrix are perceived as being substantial, it may not be worthwhile carrying them out. This is because the task may be seen as time-consuming and the time better spent - or indeed, saved - if ab initio development were undertaken instead. Obviously, it is not possible to state categorically what the outcome might be at this decision-making point: what appears as a substantial and unmanageable modification to one curiculum developer will appear feasible to another. As Blum et al. (1979), referred to in Chapter 2 of this study, observe

> "...solutions ... depend on value judgements. In each specific case, the antecedents and issues are different ".(Blum et al., 1979, p.3)

Thus, the application of principles of rational decision-making on the 'feasibility' decision is likely to result in some variation at this point. However, the curriculum developer who recognizes the theoretical principles which underpin development work, and who has a realistic understanding of the constraints and opportunities operating at institutional level, is clearly in a more favourable position to make sound judgements than the inexperienced and naive.

Section 3.4: Types of material and their implications for adaptive work

The worked example offered in Table 3.2 above which features the application of a 'match / mismatch' matrix to a set of student resource materials, demonstrates that the following categories relating to the 'existing' material, have been designated 'flexible':

(i) sequencing of content;

(ii) teaching approach(es)/type(s) of learning experience;

(iii) teaching time requirement and its organization;

(iv) resource requirements.

This indicates that no recommendations have been made by the 'original' curriculum developer with respect to these curricular and contextual features and that this necessarily accords, to the 'user', the responsibility for decision-making in these areas. As far as the curriculum 'adopter'/'adaptor' is concerned, this means that 'mismatch' cannot occur and that the 'flexibility' of the 'existing' materials inevitably ensures 'match' with those corresponding features in the materials to be developed.

The situation described above demonstrates that, in applying the 'match / mismatch' matrix, it is not always possible to supply information relating to all the curricular and contextual features of the 'existing' material and that consequently, such features which are unspecifiable cannot be affected by the adaptation task. The fact that the worked example applied to 'flexible' student resource materials is a significant one, because the situation reflected therein may be contrasted with that which arises when teaching and learning materials are more 'structured' and where fairly firm guidelines are set out, by the 'original' curriculum developer, for the conduct and organization of the curriculum/programme. Where the curriculum developer has designed a

more 'structured' package of this latter type, it will be possible to provide information of a precise nature about most of, if not all, the categories of the matrix.

The above observations draw attention to the fact that 'existing' materials may be categorized according to their manifest degree of 'flexibility'/'structure' and that these qualities have a bearing on the adaptation activity. More specifically, the nature of the materials has implications for the locus and extent of the modification tasks to be undertaken and hence a relationship exists between the type of 'existing' material being used for adaptive work and its 'adaptability'. For a closer analysis of this aspect, it is expedient to reflect on the different kinds of project which have been designed for the school sector on the basis of the type of the material they have produced. Here it will be seen that the 'output' of projects may, in general, be broadly classified as follows:

(i) Teacher development materials - materials designed predominantly to enhance teachers' professional competences and/or bring about their re-orientation.

(ii) Teacher resource materials - materials for use by teachers in the planning and conduct of their courses.

(iii) Student resource materials - materials from which the teacher may select, for use by students as study materials, within a course framework decided upon by the teacher.

(iv) Teaching/learning materials - materials which give teachers extensive guidance about course organization, teaching activities and learning materials.

(v) Learning materials - materials written for use by students as a chief source of information on subject matter content, learning activities and tasks.

Table 3.3: Relationship between different types of project and extent of precision provided by the curriculum developer in relation to different features

'OUTPUTS' / FEATURES	TEACHER DEVELOPMENT MATERIALS (e.g., Design and Craft Education Project)	TEACHER RESOURCE MATERIALS (e.g., Nuffield Secondary Science)	STUDENT RESOURCE MATERIALS (e.g., Science in Society)	TEACHING/LEARNING MATERIALS (e.g., Nuffield 'O'/'A' level)	LEARNING MATERIALS (e.g., General Studies Project
TARGET POPULATION	Broadly defined	Defined	Broadly defined	Defined	Defined
SUBJECT/STUDY AREA and its CONTENT	Broadly defined	Broadly defined	Broadly defined	Defined	Broadly defined
ORGANIZATION and SEQUENCING of CONTENT	Flexible	Broadly defined	Flexible	Defined	Broadly defined
LEARNING OUTCOMES (GOALS and/or OBJECTIVES)	Flexible	Broadly defined	Broadly defined	Defined	Broadly defined
TEACHING APPROACH(ES)/ TYPE(S) of LEARNING EXPERIENCE	Flexible	Defined	Flexible	Defined	Broadly defined
TEACHING TIME REQUIREMENT and its ORGANIZATION	Flexible	Broadly defined	Flexible	Defined	Flexible
RESOURCE REQUIREMENTS	Flexible	Broadly defined	Flexible	Defined	Flexible

Notes: (i) 'Defined' indicates that the 'original' curriculum developer had issued precise instructions to the curriculum 'user' with respect to the particular curricular or contextual feature. It implies that the stipulations are to be strictly adhered to if the intentions of the developer are to be correctly and appropriately implemented.

(ii) 'Broadly defined' indicates that the 'original' curriculum developer had made certain recommendations with respect to the particular feature but had accorded to the 'user' some degree of interpretation and choice.

(iii) 'Flexible' indicates that the 'original' curriculum developer had allowed the 'user' to make the decisions with respect to the particular feature.

If the categories of the matrix are now examined in relation to each of these five different types of 'outputs' from curriculum projects, it may be demonstrated that materials will vary considerably in the extent to which they provide precise instructions relating to curricular and contextual features, and thus the extent of 'flexibility' which is built into the usage patterns originally intended for the materials. Table 3.3 above provides an example of each type described in (i) - (v) above. It shows the degree of specification provided in the 'original' materials in relation to the different features of the matrix, and hence the nature and extent of the information which may be detailed therein. In the case of teacher development materials, for example, there is only a low degree of specification whereas in that of teaching/learning materials, there is a high degree of specification which provides information for each of the categories of the matrix. Figure 3.2 (below) presents these different types of material on a continuum in terms of the degree of specification offered. In general, the greater the degree of specification, the greater the number of curricular/contextual features which will need to be 'matched' in relation to the adoption/adaptation task. This points to the probability that the possibilities for adaptive curriculum activity are enhanced by 'flexibility' built into the curriculum materials.

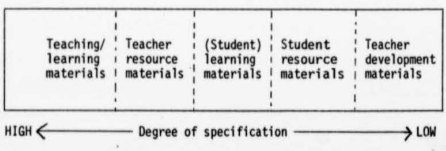


Figure 3.2: Degree of specification offered in different types of curriculum/resource 'package'.

It should be noted at this juncture that in situations where the main function to be served is that of teacher development, materials are not generally provided which can be adopted/adapted for use with students. Such materials tend to serve only to illustrate guidelines/recommendations which have been offered to teachers to encourage changes in pedagogical practices. Teacher development materials are therefore classifiable more in terms of a 'collection of ideas' rather than as curriculum materials, and therefore fall outside the ambit of adoption/adaptation activities.

Section 3.5: Reviewing the model

The model presented here for adaptive curriculum work is essentially a decision-making framework which has two foci, viz.,

(i) the conditions under which (a) ADOPTION, (b) ADAPTATION and (c) AB INITIO DEVELOPMENT respectively are chosen as the curriculum development strategy;

(ii) the decision-making issues and procedures which feature the conduct of adaptive work per se.

In an overall sense, therefore, the decision-making framework serves to define those areas of judgement and activity which are exclusive to adaptive work and, in a more specific sense, the distinguishing features of different modes of adaptive work - ADOPTION and ADAPTATION.

The 'match/mismatch' matrix, as an aid to the appraisal of materials, is intended to be used at those points in the decision-making framework which concern two major decisions relating to adaptive work - its suitability as a curriculum development strategy and its feasibility, both in theoretical and practical terms. The 'tool' serves to impose a logic on each step taken towards these decisions and to eliminate as much

unsystematic and intuitive thinking as possible in reaching such decisions. It is nevertheless recognized that, even within a rational decision-making model, the perceptions and judgements of curriculum workers are influenced by value assumptions and expectations to what is, in the final analysis, suitable and feasible. Clearly, a number of interactive factors relating both to qualities and attributes of the curriculum developer him/herself, and to aspects in the institutional context in which he/she is working, have a role to play here.

It is also recognized that the decision-making framework cannot impose generalizations - and hence give rise to guidelines for practitioners about the different strategies which the curriculum worker may initiate to bring about the actual modifications to the materials. Once again, value judgements will necessarily shape decisions made in this area of activity. Each adaptive attempt is structured by its own particular set of circumstances which relate predominantly to features in the materials themselves, features of the 'new' specification and the framework of motives, motivations and institutional constraints within which the work is conducted.

Thus, whilst it is possible to identify, at a theoretical and systematic level, the range of possibilities to be associated with adaptive work in an institution, a complementary study is required which describes and analyses a number of cases of actual adaptive attempts, using the decision-making framework and the 'match/mismatch' matrix. Apart from the obvious methodogical advantages to be gained from the structure and rigour which the application of the decision-making framework necessarily brings to such an analysis, there are two important functions to be served by applying the model presented here, viz.,

1. It demonstrates what actions and decisions curriculum

developers take, or do not take, in practice, and the reasons which they offer, or may be offered, for their actions and decisions.

2. It allows an appraisal to be made of the extent to which curriculum developers' decision-making is systematic and rational in the conduct of adaptive work.

This analysis is presented in Chapters 6 and 7 of this study. The chapter which now follows (Chapter 4) describes the nature of the empirical work which culminated in the identification of these cases of adaptive work.

CHAPTER 4 : RESEARCH DESIGN, METHODOLOGY AND ADMINISTRATION

Section 4·0 : Introduction

Chapter 1 of this study outlined the potential attractiveness of adaptive curriculum work as a strategy for curriculum development, especially in FE. It drew attention to the nature and extent of 'new' curricular demands being exerted on the sector and to aspects of its institutional features, both of which might realistically encourage the consideration of adaptive work. Such features included, e.g. the need to respond quickly to initiatives from both 'inside' and 'outside' college, limited amount of time for curriculum development work yet the pressing need to respond positively and rapidly to BTEC, FEU- and MSC-sponsored initiatives. Such considerations effectively identified the FE sector as a possible site for adaptive work in practice.

However, the literature review reported in Chapter 2 revealed that very little is known, or at least has been written about curriculum adoption/adaptation. Any accounts insofar as they exist, relate almost exclusively to issues which arise in the specific context of 'cultural transplantation' and, as such, provide no information about adaptive work which is, or might be, conducted outside the framework of that particular model. This leaves unanswered questions which arise in two crucial areas of inquiry as far as this study is concerned, viz.,

(i) the incidence of adaptive curriculum work in the FE sector;

(ii) the nature of adaptive curriculum work and the defining characteristics of the decisions procedures and conditions to be associated with this type of activity.

The recognition in theoretical terms of the contribution to be made to curriculum development practice in FE by adaptive work viewed against this absence of information clearly 'flagged' the need to conduct an empirical investigation in FE colleges. It was considered that such an investigation should serve two essential purposes. The first would be to establish base-line information about the extent to which adaptive curriculum development was taking place, and, on the assumption that some work of this kind was occurring, about the general nature of adoption/adaptation attempts. The second and major purpose of the investigation would be to collect information of a fairly detailed kind about instances of adoption/adaptation work in practice so that more could be learned about the characteristic features of this work, about the kinds of decisions which present themselves, and about the various procedures which are typically used to bring about the desired changes to 'existing' materials.

Section 4.1: Research strategy

The two reasons for engaging in empirical investigation, viz.,

(i) the exploration of the incidence of adaptive work in the FE sector and of the general nature of adoption/adaptation attempts;

(ii) the collection of detailed information concerning the nature and defining activities of adaptive work,

pointed to two areas of inquiry involving the use of different approaches. The first inquiry area consisted of broadly-based studies which, through questionnaires and follow-up activities, provided some outline data about the phenomenon of incidence, and some general information about the type of adaptive work that was being carried out in colleges. The second inquiry area called for an investigation of a

more detailed and focused type, aimed primarily at understanding practitioners' experiences of adaptive curriculum work. Through the use of structured interviews, case-study material was developed relating to a range of issues and questions about the nature of adoption/adaptation per se and about the process of bringing about modifications to 'existing' materials in order to generate 'new' curricula/programmes. The organization of this chapter reflects these two aspects of the empirical investigation, identified as Part I and Part II. Figure 4.1 (below) summarises the purpose and content of each of these two parts and the research techniques which were used.

PART I Investigation of incidence of adaptive curriculum development work in FE and general nature of adoption/adaptation attempts	1980/81 Survey (Postal questionnaires + follow-up inquiries by means of face-to-face or telephone interviews) 1985 Survey (Postal questionnaire + follow-up inquiries by further questionnaire)
PART II Development of case-study material	Detailed structured interviews (face-to face)

Figure 4.1: Research activities associated with Parts I and II of the empirical work.

The survey studies which constituted Part I of the empirical work were concerned to answer two main questions:

(i) to what extent is adoption/adaptation as a strategy for curriculum development taking place in FE?

(ii) what, in general terms, is the nature of the adoption/adaptation attempts?

These two questions were initially addressed in 1980/81. However, as

was mentioned in Chapter 1 of this study, the part-time nature of the research meant that the work extended over a somewhat protracted time-period so that, in 1985, a further opportunity was created to continue the inquiry into these two issues. The appraisal of the incidence of adoption/adaptation and of the general nature of adoption/adaptation attempts, by taking place at two different points in time, allowed some comparison to be made over the four-year period.

The surveys of 1980/81 and of 1985 were conducted by means of postal questionnaires, supported by follow-up inquiries. Postal questionnaires were regarded as appropriate means of gathering factual information of a general nature on a large national scale and on both occasions were widely distributed to FE colleges. The questionnaires were, however, followed up on both occasions in order to supplement and extend the information obtained. In 1980/81, these follow-up inquiries were conducted by telephone or face-to face interviews with practitioners of adaptive work who had been identified by means of the questionnaire. In 1985, this same function was fulfilled by a second, more detailed questionnaire.

Part II of the empirical work concerned the collection of detailed information about the conditions, decision-making issues and activities associated with adaptive curriculum work. This information was gathered by means of 'in-depth' structured interviews with practitioners of adaptive work in FE colleges. The nature of the questions asked in these interviews, and consequently the nature of the case-studies which were developed from the interview material, was informed by the theoretical considerations reported in Chapter 3 of this study. In this way, the theoretical model presented in Chapter 3 provided the underlying assumptions and general ethos for the design of the

interview schedule.

The following sections of this chapter present detailed descriptive analyses of the major aspects of the empirical work. For Part I of the work (that which concerns the incidence and general nature of adoption/adaptation attempts), these are:

(i) the content and administration of the 1980/81 and the 1985 questionnaires;

(ii) the nature and organization of the follow-up inquiries.

For Part II of the work (that which concerns the development of case-study material), a description and discussion of the content and administration of the interviews are presented. These aspects are organized in the following manner. Section 4.2 and 4.3 relate to Part I of the study. Section 4.2 describes the content of the postal questionnaire used in 1980/81, explains its rationale and gives brief information about administrative issues. It also provides a short account of the follow-up inquiries. Section 4.3 is concerned with the 1985 survey. It explains why a somewhat different methodological approach was used (compared with the 1980/81 survey) and briefly describes the content and administration of the questionnaire which was initially sent out. It then gives details of the follow-up inquiries conducted by means of a second questionnaire. Finally, Section 4.4 outlines the items included in the interviews with practitioners of adaptive work by reference to the theoretical model presented in Chapter 3, and comments on some methodological implications arising from the administration of these interviews.

Section 4.2: Part I - the 1980/81 survey

As stated in the previous section, the 1980/81 survey had two main functions:

(i) to establish whether, and if so, to what extent, adaptive curriculum work was taking place in FE;

(ii) to gain a general understanding of the nature of the adoption/adaptation attempts.

The questionnaire which was designed for the purposes of this survey covered four specific areas of inquiry, viz.,

(i) past and present involvement in adaptive curriculum development;

(ii) type of adaptive work (i.e., adoption and/or adaptation) undertaken;

(iii) major subject/study areas in which 'adopted'/'adapted' materials had been used;

(iv) nature/type of material used for such work.

In relation to (i) above, two questions probed whether adaptive work was currently in progress or whether it was planned for some future date. With respect to (ii) above, respondents were given a brief definition of the terms 'adoption' and 'adaptation' and asked to classify their adaptive activities accordingly. The information emanating from (iii) above was concerned to provide a broad overview of the main areas (e.g., General Education, Vocational Preparation or Vocational Training) in which adaptive work featured. Finally, information relating to (iv) above was intended to give an idea of the source and purposes of the 'original' materials.

In order to encourage swift and ready replies to the questionnaire, it was kept deliberately brief. Moreover, as it was intended essentially as

an identifying and locating device which would provide the basis for follow-up inquiries, there was no advantage to be gained by increasing its length. To facilitate its completion, 8 of the 10 short questions contained therein were 'closed' and, with one exception, required 'yes' or 'no' answers. A copy of this questionnaire appears as Appendix B.1.

The questionnaire was incorporated in a newsletter which the Further Education Unit (FEU) agreed to circulate and send out by post, in October 1980, to FE establishments in England and Wales which had previously established communication links with the Unit. This sample contained a high proportion of colleges offering non-advanced courses. The questionnaire was addressed to college principals who were asked to either complete it themselves or to pass it on to some other appropriate person to complete. Where there was no involvement, either currently or in the past, with adaptive curriculum development, respondents were asked to answer the first question (relating to the incidence of such work) in the negative and to send the questionnaire back as a 'nil return'.

The advantage of this method of distribution was that the questionnaire was seen to have the backing and approval of the FEU which, it may be assumed, gave it some 'authority' in the eyes of its recipients. The disadvantages, however, were that the researcher was not involved in the identification of colleges which received the questionnaire and, being addressed to college principals rather than directly to practitioners of adaptive work, it was not possible to exercise control over the circulation of the questionnaire, once it reached the colleges concerned. Thus, it was possible that those college principals who completed and returned the questionnaires themselves may not,

understandably, have known with any certainty whether or not an individual member of staff was, or had been, involved in adaptive curriculum work. This naturally raised questions about the accuracy of the information obtained from the questionnaire for it was possible that in some cases, adaptive work was occurring but that it was unpublicised or undocumented within the college. Equally, it raised the possibility that curriculum development work which, to someone not involved, might have appeared to be of an adaptive nature, would not be defined as such by any person/people actually carrying out such work or, alternatively, would not be in accord with the definition of adaptive work used in this study. However, whilst recognizing these problems, it was felt that the questionnaire, nevertheless, provided a means of establishing personal contact with colleges and that the follow-up inquiries would go a considerable way towards establishing with some certainty, whether or not work of this nature was in fact occurring, as well as checking the accuracy of the information so far obtained.

The follow-up interviews were conducted with those respondents who indicated that they were, or had been, involved in adaptive work, and who additionally indicated their own or a colleague's willingness to talk about their activities. In the main, these inquiries were conducted by telephone although, in some cases, where the colleges involved in adaptive work were reasonably near geographically, this was done by personal visit.

The main purposes of the follow up interviews were:

(i) to check and verify the claims of involvement in adaptive activities;

(ii) to extend and give more detail to the outline information provided through the postal questionnaire about

subject/study areas in which adaptive work had been carried out, and about the type of courses/programmes in which 'adopted'/'adapted' materials had been used;

(iii) to gain a general understanding of the circumstances under which practitioners came to be involved in adaptive work, and of the sources of the 'existing' materials used;

(iv) to establish personal contact with practitioners of adaptive work.

The information obtained from these follow-up interviews with the 'contact people' in the colleges was collated with that obtained from the postal questionnaires so that a profile of the incidence and general nature of adaptive curriculum development work in 1980/81 could be established.

Section 4.3: Part I - the 1985 survey

In 1985, the 1980/81 investigation into the incidence and general nature of adoption/adaptation in FE colleges was continued and extended. A second inquiry into these two areas was seen to offer certain advantages, viz.,

(i) it would provide further information and an enhanced understanding of (a) the circumstances under which adaptive work was considered and/or used as a strategy for curriculum development in FE and (b) the general nature of adoption/adaptation attempts;

(ii) it would enable a 'mapping' of any changes in relation to the nature of incidence of adaptive work and thus allow some kind of comparative picture to emerge.

It was decided that the approach to the study of incidence of adaptive work would be of a somewhat different nature to that of the 1980/81 survey. The 1980/81 questionnaire had explicitly addressed the issue of adaptive work and had asked respondents to classify their activities as "mainly adoption" or "mainly adaptation". However, in the light of insights into the nature of adaptive work in the FE sector gained from the information resulting from the 1980/81 survey, it was considered that the imposition of a theoretically-derived distinction such as this might not always faithfully reflect adaptive work as it is practised. The use of 'existing' materials in a particular instance might, for example, involve aspects of both adoption and adaptation. Alternatively, the generation of 'new' materials might be achieved by the co-ordinated use of 'adopted', 'adapted' and ab initio developed curricular components. With hindsight, therefore, it was felt that asking respondents to categorize their work as "mainly adoption" or "mainly adaptation" might be somewhat restrictive and might over-simplify the nature of the processes involved in adaptive work in practice.

Related to this problem of classification is the possibility of error, on the part of the respondent, in applying definitions of 'adoption' and 'adaptation' to his/her curriculum development activities. To achieve an accurate application, a respondent's understanding of these terms needs to accord with the meaning intended by the questioner. Since this understanding can only be verified in the course of appropriate follow-up inquiries, such as through interviewing, this introduces an element of methodological weakness into the questionnaire.

The 1985 survey attempted to introduce more rigour into this particular aspect of the inquiry by shifting the onus of responsibility for

classifying adaptive curriculum activities away from the respondent. A questionnaire was designed which avoided explicit reference to 'adoption' and 'adaptation' and thus obviated the need to offer definitions. Instead, the questionnaire inquired, in a very general sense, into the incidence, either on-going or in the recent past, of curriculum development work, and asked whether 'existing' materials has been used. Additional questions were asked about the courses/programmes in relation to which curriculum development had taken place, about the location of the work (faculty, department, section of the college) and for the name of a 'contact person'.

The questionnaire was very short, consisting of six questions of which three were 'closed'. If curriculum development was not currently taking place in the college, or had not taken place in the preceding two years, respondents were asked to return the questionnaire as a 'nil return'. The question relating to the use of 'existing' materials for curriculum development work in the college invited a 'yes', 'no', or 'not known' response. This questionnaire was sent out in March 1985 to college principals in all FE establishments in the British Isles which, at that time, totalled 499, and respondents were given three weeks in which to complete and return the form. A copy of the questionnaire appears as Appendix B.2.

After the deadline for the return of the questionnaires had passed, the responses were sorted into two main categories, viz., those which were to be discarded and those which would be considered for possible further investigation. The discarded returns were those which

(i) had given a negative response to on-going or recent past curriculum development work;

(ii) had written 'unknown' in response to the question about the

use of 'existing' materials for development work ;

(iii) had failed to provide the name of a 'contact person' for follow-up inquiries.

Those retained for possible future use were therefore those which

(i) had given positive responses to the questions about involvement in curriculum development work and the use of 'existing' materials;

(ii) had given the name of a person to contact in the college for further information.

At this point, a further postal questionnaire was planned which could 'home in' on the issue of the use of 'existing' materials. The questions identified for this follow-up inquiry related to the following issues:

(i) type of material produced (learning materials, resource materials), nature of target group (students, tutors) and the name of the course/programme for which the materials were used;

(ii) identification of the 'existing' materials used and the nature of the modifications (little or no change, moderate change, substantial change);

(iii) organization of the development work (individual or collaborative basis);

(iv) success of work or problems encountered ;

(v) availability of materials and/or staff for follow-up inquiries through visit to the college.

This second questionnaire consisted of 14 questions, eight of which were 'closed'. The six 'open' questions were so formulated as to encourage qualitative information relating to adaptive work so that an informed decision might later be reached about the value of a particular case for further investigation. A copy of this questionnaire appears as

Appendix B.3. The questionnaire was sent out, in late June 1985, to some of the 'contact people' identified by the respondents to the March questionnaire (i.e., the college principals). The target group chosen to receive this questionnaire was identified according to two main criteria:

(i) the area of responsibility of the designated 'contact person';

(ii) the quantity and quality of the information provided through the March questionnaire about adaptive work.

In relation to (i) above, it was important that the 'contact person' should be from the faculty/department/section of the college where the adaptive work was taking place or that he/she had a good overview of, if not direct involvement with, the work (such a person would, e.g., be the college's Curriculum Development Officer). Clearly, the 'contact person' needed to be able to talk with some authority about the nature of the adaptive work. In relation to (ii) above, the quality and quantity of information provided in the March questionnaire obviously had a bearing on whether the designated 'contact person' received the second questionnaire. Where the information was poor and sparse, the 'lead' was not followed up. Thus the June follow-up questionnaire was sent to a selection of 'contact people' who appeared to hold out hope of providing relevant information of a general nature about the practice of adaptive work in their colleges.

The approach adopted for the administration of the 1985 survey was seen to have advantages over that used for the 1980/81 survey. Although, in both instances, the initial questionnaire was sent to college principals, the provision in the first questionnaire of the 1985 survey for the identification of a 'contact person' meant that, after suitable 'screening' of the 'contact person' had taken place (see i. and ii. in the previous paragraph), the follow-up inquiries were able to

provide very relevant information from an appropriately informed person in a direct and immediate way, and could thus achieve a more precise focus than would otherwise have been the case. Moreover, the use of a second questionnaire for the follow-up inquiries, rather than telephone or face-to-face interviews, resulted in the collection of a large amount of information in a relatively short period of time.

Section 4.4: Part II – the development of case-study material

As Section 4.1 indicated, Part II of the empirical work was concerned with the collection of information about practitioners' experience of adaptive curriculum work in practice. This was seen as a highly significant and important aspect of the study. The literature review had demonstrated that most of the documented accounts of adoption/adaptation work related to the specific concerns, issues and problems of 'cultural transplantation' and that nothing of a substantive nature had been written about adoption/adaptation work as a strategy for curriculum development. The investigation and analysis of actual cases of adaptive work provided a genuine opportunity to explore the conditions under which such work is conducted, the decision-issues which arise, the nature of the decisions that are taken and the actions/procedures that are used to generate 'new' materials. The establishment of a body of information of this kind was essential if understanding of the nature and processes of adaptive work was to be advanced.

In order to obtain detailed and comprehensive information about the issues under investigation, it was decided to conduct extensive in-depth structured interviews with curriculum developers in colleges who had used adoption/adaptation to respond to 'new' curriculum/course

needs. The case-study material to be developed would then be subjected to rigorous analysis and evaluation. The theoretical framework for decision-making presented in Chapter 3 obviously played the key role here for it was used both to 'frame' the nature and processes of the collection of relevant information, and to provide the essential parameters within which the information was subsequently analysed and appraised.

The questions asked during the conduct of the interviews were therefore grounded in the same theoretical considerations that had informed the model presented in Chapter 3 of this study. Thus the method of collecting the information about the nature of the decision-making that had occurred during the conduct of adaptation work was predicated upon the same rational principles as those reflected in the decision-making framework and the 'match'/'mismatch' matrix. By using the framework as a 'reference' or gauge, the intention was not only to provide an insight into what actions, procedures, decisions and conditions had, in reality, been attended to, but also to throw into relief those actions, procedures etc. which in theory existed, but which had not, in practice, been considered. This enabled observations to be made about the nature and characteristics of practitioners' decision-making and to assess to what extent the essential principles of adaptive work were recognized in practice.

The issues which required investigation during the interviews were identified as follows:

(i) the reasons for, and the conditions under which, the decision to engage in adaptive work was arrived at;

(ii) the factors which influenced the choice of the curriculum/resource materials used for the adaptive work;

(iii) the criteria used for judging the appropriateness of the materials chosen for the adoption/adaptation ;

(iv) the characteristics to be associated with the curriculum/resource materials chosen for the adaptive work;

(v) the various conditions which needed to be met/satisfied by the 'new' materials, i.e., those to be developed;

(vi) the procedures/activities recognized as necessary to remove 'mismatch' between the 'existing' materials and those to be developed;

(vii) the adaptation activities which were actually undertaken in the curriculum development work.

These issues were then used as the basis for the questions put to those FE practitioners who had been involved in actual adoption/adaptation attempts. The interviews, which were conducted in face-to-face settings, involved extensive and detailed questioning on each issue. Most of the interviews were recorded by tape-recorder and later transcribed. On the few occasions when this method was unacceptable or proved logistically difficult , notes taken at the time of the interview were elaborated and written up immediately after the interview had taken place.

The identification of cases of adaptive work for this aspect of the study proved to be rather more difficult than expected. During the course of the 1980/81 and 1985 survey studies, a number of cases of adaptive work for potential development into case-study material were 'screened'. However, the number of cases which , on further investigation, presented themselves as genuine candidates for in-depth analysis was not as large as had initially been anticipated because of the problems encountered in obtaining from the interviewees, information of a sufficiently detailed kind. Obtaining information through structured

interviewing techniques placed heavy reliance on the interviewees' ability to recall, with some accuracy, the nature of the various decisions they had taken, the conditions under which they had taken them and the reasons for such decisions. It also required them to identify, with some certainty, the source of the 'original' materials which they had used and to articulate how and why they had carried out modifications to the materials. The 'reconstructionist' nature of this type of information-collection thus has the disadvantage of using, as data, practitioners' interpretations of an experience which necessarily has to be recalled, and this may prove either impossible or give rise to some distortion to the events. On the other hand, this disadvantage may, to some extent, be off-set if 'adopted'/'adapted' materials are made available so that they can be compared with the 'original' materials. This, in fact, occurred in relation to a number of cases which were eventually chosen for analysis.

The disadvantages of using 'reconstruction' as a method of obtaining information had been recognized at an early stage of the empirical work. For this reason, it had been hoped that instances of on-going adaptive work might be identified which were organized on a 'formal' and collaborative basis in colleges, as a staff development exercise. Under these circumstances, some information could, additionally have been collected by participant or non-participant observation methods. However, the 1980/81 and 1985 inquiries identified only one case of a 'team' approach to curriculum development. Moreover, this was not formally defined as an exercise in curriculum adaptation; rather, there was the implicit assumption underlying the activities of this group of curriculum developers that, in view of their lack of experience and expertise in curriculum development, their response to 'new' programme needs would be in terms of the 'direct' use of 'existing' materials located

within the college, viz., by using adoption. However, in the event it proved impossible, for a range of logistic and organizational difficulties relating to the nature, timing and conduct of any meetings held by this team, to collect relevant information about the conduct of adaptive work, using observational techniques. Methodological constraints thus served to narrow the choice of instances for development into case-study material to those whose details could most readily be recalled by those involved in the adoption/adaptation work. In all, 10 cases were finally chosen for this purpose which was fewer than had originally been hoped for. Nevertheless, it proved to be a number large enough to reflect a range of possibilities, conditions and activities for adoption/adaptation work in practice, and so ensure that criteria of typicality and representativeness were met.

The data emanating from the survey studies of 1980/81 and 1985 into the incidence and general nature of adoption/adaptation attempts are presented in the following chapter (Chapter 5), whilst the analysis of the case-study material is presented in Chapters 6 and 7.

CHAPTER 5: INCIDENCE AND GENERAL NATURE OF ADOPTION/ADAPTATION ATTEMPTS IN FURTHER EDUCATION COLLEGES

Section 5.0: Introduction

As indicated in the previous chapter, the empirical investigation conducted in FE colleges into the incidence and general nature of adoption/adaptation attempts in FE colleges was carried out at two different points in time. The 1980/81 survey was intended as a tentative probing into the incidence of adaptive work in the FE sector and as a means of establishing some preliminary base-line data about the general nature of any such work which may have taken place. At that particular juncture, it was already suspected, as a result of previous informal 'soundings', that very little work of this nature was in fact being conducted. However, the FEU's offer to include a short questionnaire within a newsletter as part of its usual mailings to colleges presented an opportunity for some initial exploration of possible adoption/adaptation attempts. Whilst it was recognized that, inevitably, only a random distribution of the questionnaire would be achieved and that any information which resulted could, at best, merely provide very broad indicators about the incidence and general nature of any adaptive work, this particular exercise was, nevertheless, seen as having some value.

In contrast to the 1980/81 inquiry, the 1985 survey achieved a wider distribution and was able to 'isolate' instances of adaptive work in a more immediate way. As explained in Chapter 4, two questionnaires were used on this occasion. The first was distributed to every college of Further Education in the British Isles whilst the second, follow-up

questionnaire was sent to those 'contact people' who appeared to be involved in, or could provide information about adaptive work in their respective colleges. In this sense, the 1985 survey focused more sharply and more directly on the issues under investigation. However, whilst the incidence of adoption/adaption attempts at this point in time was still a matter of interest - in particular the extent to which knowledge about, and practice of adoption/adaptation as a strategy for curriculum development might have changed during this four-year interval - the main intention was to collect additional information on the general nature of adoption/adaptation attempts to supplement the findings of the 1980/81 survey.

The purpose of this chapter is to present the results of (i) the 1980/81 survey and (ii) the 1985 survey. This gives rise to two distinct components to the chapter. These components cover the same broad issues, viz., the incidence and general nature of adaptive curriculum work. However, the nature of the information is quantitatively different. Less information was collected in 1980/81 and the tentative findings emanating from the survey clearly do not lend themselves to statistical presentation; neither do they, per se, yield information from which 'robust' generalizations may be drawn. It is however considered that, viewed against the context of its intended purpose - that of a 'probe' or 'snapshot view' at a particular point in time - this information provides some insights into the research questions being investigated here and establishes a base for the conduct of the second inquiry which took place in 1985.

Section 5.1: The 1980/81 inquiry

This section discusses the results of the investigation which took place in 1980/81 to establish

(i) the extent to which adaptive work was being used as a strategy for curriculum development in FE;

(ii) some of the defining characteristics of such work.

The section is divided into three subsections, the first of which reports on the incidence of adaptive curriculum work at that time (see 'The incidence of adaptive curriculum work'). In order to establish the general nature of the adaptive work, however, an analysis of the information was conducted, guided by the following questions:

1. In what major subject/study areas was the adaptive curriculum work conducted?
2. In relation to which courses/programmes was the adaptive work carried out?
3. Who were the 'consumers' of the 'adopted'/'adapted' materials?
4. What were the broad aims of the adaptive work?
5. What type of material was produced by adoption/adaptation activity?
6. What were the sources of the 'original' materials used for the work?

The information relating to these questions is presented in two further subsections under the following headings:

'Study areas/courses associated with adaptive curriculum work' (this relates to Questions 1 and 2 above).

'Purposes of adaptive curriculum work and sources of "original" materials' (this relates to Questions 3, 4, 5 and 6 above).

Section 5.1.1: The incidence of adaptive curriculum work

The questionnaire included in the newsletter which the FEU sent out provided 63 replies. Of these, 44 indicated that adoption/adaptation had not been used as a strategy for curriculum development in their colleges and that, to their knowledge, such a strategy to meet 'new' course/curriculum needs was not being considered for the future either. The remainder - 19 respondents - gave a positive response to the question relating to past or current involvement in adaptive curriculum work in their institutions. However, further scrutiny and follow-up inquiries revealed that only 13 of the reported 19 cases represented genuine attempts in this area. Thus, even in relation to a limited target population of colleges, fewer than 20%, i.e., one college in five, was positively involved, at that time, in adoption/adaptation work.

This apparently very low rate of incidence needs to be assessed with a number of provisos in mind. As indicated in the previous chapter (Chapter 4), there could be no certainty that this initial inquiry had established contact with staff in colleges most appropriately placed to provide the necessary information. Standard routine communications from 'outside' official bodies such as the FEU are not always read by busy college principals with heavy administrative responsibilities, and thus there was a real chance that a questionnaire appearing, as it did on the second page of a newsletter, was overlooked. Moreover, many college principals do not concern themselves directly with curriculum development issues but rather allocate that responsibility to a Vice-Principal or a member of the senior staff with a formally recognized brief for this area of activity. Under these circumstances, the itinerary of the questionnaire through a college's bureaucratic structure to a member of staff in the most advantageous position to

provide the sought-for information could be a problematic and haphazard process. Finally, assuming that the questionnaire in fact reached an appropriate member of staff, two further problems presented themselves: a positive response relating to adoption/adaptation activity depended upon a respondent's knowledge of what curriculum development activity was occurring in different departments/sections of the college and upon his/her ability to 'correctly' apply to any such activities the definitions of 'adoption' and 'adaptation' provided in the accompanying newsletter.

These (mainly logistical) difficulties aside, however, the fact that fewer than one in five colleges was engaged, or had been engaged, in adaptive curriculum work was disappointing but, nevertheless, unsurprising. The outcome reinforced the overwhelming conclusion to be drawn from the literature review reported in Chapter 2 of this study that, in practice, very little attention was being given to this strategy as a means of generating 'new' course/curriculum material, certainly in the FE sector at the beginning of the 1980s. Moreover, the low reported incidence confirmed the impression gained from informal inquiries conducted with previously established contacts in FE colleges prior to the despatch of the 1980/81 questionnaire - that the possibilities and potential offered by adoption/adaptation were largely being overlooked within the general ambit of curriculum development activity in FE.

The 13 identified instances of adaptive work, nevertheless, established a 'starting point' for the exploration of the defining features of such work. For this purpose, information relating to the six questions set out in the introduction to this section was collected for each of the 13 cases, viz.,

(i) name/type of course involved

(ii) subject/study area (in which adaptive work had been carried out)

(iii) its student target population

(iv) broad aims (underlying the adaptive work)

(v) type of material produced (by adaptive means)

(vi) nature of the 'original' material.

This information is presented in summary form in Table 5.1 overleaf and is elaborated and discussed in the two following subsections.

Section 5.1.2: Study areas/courses associated with adaptive curriculum work

In order to comment on the information presented in Table 5.1 in terms of courses/programmes and major subject/study areas in which the adaptive work was conducted, some kind of classification system (or systems) should be imposed. Taking Advanced FE (AFE) and Non-Advanced FE (NAFE) as the broadest categories for sorting the reported instances, it is noted that, with one exception, these were in relation to NAFE. (The exception was a CNAA-validated BA degree in Photography/Graphic Design which had been developed through collaborative work between a College of Further Education and a Polytechnic involving the adaptation of course materials originally used for a lower level course in FE.)

Within NAFE, the cases may be grouped according to principal study areas in which 'adopted'/'adapted' materials had been used. These are in order of prominence:

1. Science-based Craft and Technology Studies (6 cases, viz., Cases 1-6 in Table 5.1).

Table 5.1: Summary information relating to instances of adaptive curriculum work (1980/81)

Name/type course	Subject/study area	Student target population	Broad aims	Type of material produced	Nature of 'original' material
1. CGLI Foundation Course in Construction	General Science	16+ medium/ low ability	To develop notes of guidance for the conduct of courses	Teacher resource	School-oriented curriculum project
2. CGLI Foundation Course for Science Industries	Science	16+ medium/ low ability	To develop notes of guidance for the conduct of courses	Teacher resource	School-oriented curriculum projects
3. CNA degree (BA)	Photography/ Graphic Design	18+ high ability	To develop materials appropriate for degree level work	Student resource	Course materials used in Further Education
4. Software and Technical Documentation	Science and Technology	Adults, 25-40 years old, medium/high ability	To develop materials relating to the impact of developments in science and technology for a course designed to train technical writers	Student resource	School-oriented curriculum project
5. CGLI Craft Courses, e.g., in engineering, printing, hair dressing and health studies	Science (mainly Chemistry)	16+, low/medium ability	To develop science-related components for this range of courses	Student resource + (student) learning	School-oriented curriculum projects
6. TEC Engineering (Level I)	Chemistry	16+ medium ability	To develop self-instructional study units for remedial purposes	(Student) learning	School-oriented curriculum project
7. OU-sponsored scheme	Social and Life Skills, particularly parenthood/child development	16+, mixed ability	To develop range of courses for study by students working individually and in groups	Teacher resource	Course materials used in Adult Education

Notes: Under "Nature of 'original' material", 'school-oriented' refers to the secondary school sector, "Higher Education' materials to graduate or post-graduate level materials and 'Adult Education' to sub-degree level materials, written as a source of general information for adults.

Table 5.1 (cont.): Summary information relating to instances of adaptive curriculum work (1980/81)

Name/type course	Subject/study area	Student target population	Broad aims	Type of material produced	Nature of 'original' material
8. TEC in Hotel Catering and Institutional Management (Level I)	General Studies	16+, medium ability	To develop materials relating to consumer behaviour	Teacher resource + Student resource	Course materials used in Higher Education
9. Various MSC-sponsored schemes	Social and Life Skills	16+, low ability, some ESN(M) handicapped	To develop a variety of materials for use by students working individually with a tutor	Student resource	School-oriented curriculum project
10. Various MSC-sponsored schemes	Social and Life Skills	16+ mixed ability (many from ethnic minorities)	To develop programmes of work designed to meet the needs of individual students	Student resource	Course materials used in Further Education
11. Various MSC-sponsored schemes	Social and Life Skills	16+ mixed, mainly low ability	To develop a variety of materials for use by students working individually with a tutor	Student resource	Course materials used in Further Education
12. BEC (General) Diploma	Accounting/Numeracy	16+, medium ability	To develop materials for students in areas of commerce and office practice	Student resource	School-oriented texts
13. BEC (National) Diploma	Inter-disciplinary (CNA material)	17+ medium/ high ability	To develop case-study material emphasising problem-solving skills for use in cross-modular assignments	Student resource	Course materials used in Higher Education

Notes: Under "Nature of 'original' material", 'school-oriented' refers to the secondary school sector, 'Higher Education' materials to graduate or post-graduate level materials and 'Adult Education' to sub-degree level materials, written as a source of general information for adults.

2. General Studies (5 cases, viz., Cases 7-11 in Table 5.1).
3. Business Studies (2 cases, viz., Cases 12 and 13 in Table 5.1).

Science-based Craft and Technology Studies, which are conventionally described under the label 'Traditional Vocational/Technical' aspects of NAFE (this term is, e.g., used in 'Vocational Preparation', FEU, 1981), featured prominently the adoption/adaptation of 'conventional' science materials (mainly from chemistry and physics). These materials, once 'adopted' or 'adapted', made their appearance in such courses as Technician Education Council (TEC) (as it was then called) Level I, and in City and Guilds of London Institute (CGLI) Craft Studies courses. In relation to this latter category, there were reported practices of adoption/adaptation activity concerning science-related components for a wide range of courses (engineering, printing, photography, hairdressing and health studies).

'General Studies' has been used here almost as a 'flag of convenience' to convey the nature of adaptive work which was, in 1980/81, taking place in the emergent Vocational Preparation area (although one reported case of adoption/adaptation was in relation to a General Studies component of TEC, Level I).

Within Vocational Preparation may be included other sub-categories, viz., full-time pre-employment courses, Youth Opportunities Programme (YOP) schemes, and other similar (mainly MSC-funded) schemes. The reported cases of adoption/adaptation which may be placed within Vocational Preparation were, with one exception, in relation to YOP schemes, and more specifically, concerned the development of materials for the component which, at that time, was referred to as 'Social and Life Skills'.

Finally, in the area of Business Studies, adoption/adaptation activity was reported in relation to Business Education Council (BEC) (as it was then called) courses - at General and at National Diploma levels. For the General level, the activity was in relation to the development of course content for a particular modular area (viz., Numeracy and Accounting) and for the National level to the development of issue-, or problem-oriented ('integrated') material for use in cross-modular assignments.

Figure 5.1 overleaf summarizes the above information in a form which attempts to link the main areas and levels in relation to which adaptive curriculum work was occurring in 1980/81, to specific courses, subject/study areas and (where applicable) validating and sponsoring bodies. The categories, of AFE, NAFE, 'Traditional Vocational/Technical' and 'Vocational Preparation', together with their respective subdivisions, are those used in 'Vocational Preparation' (FEU, 1981). (It should be noted that some of the categories which feature in 'Vocational Preparation' are not used here. This is because adaptive work in 1980/81 did not occur in relation to those categories.)

Section 5.1.3: Purposes of adaptive curriculum work and sources of 'original' materials

It is noted from the information offered in Table 5.1 that adaptive work was undertaken predominantly to generate 'new' materials for student target populations, although some materials were produced with teachers (and this includes tutors, trainers and instructors) in mind. In terms of the classification of materials offered in Chapter 3 of this study

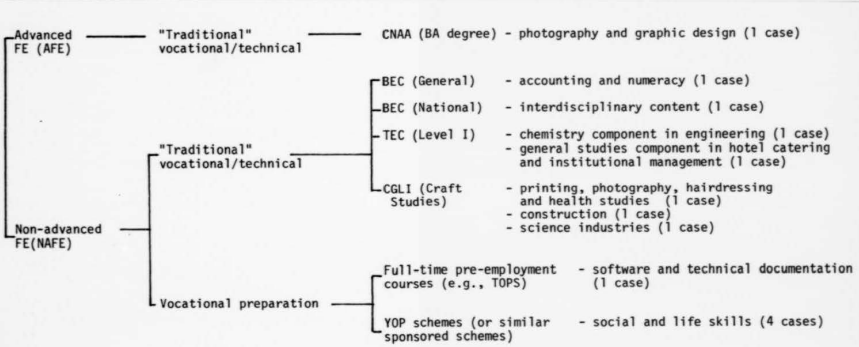


Figure 5.1: Courses/schemes in which 'adopted'/'adapted' materials were used (1980/81)

(which groups curriculum/resource materials according to the different purposes for which they may be used), the adaptive work conducted in the 13 instances was frequently directed towards generating student resource material. This occurred with respect to (i) Traditional Vocational/Technical areas where new business and technician programmes were being initiated by TEC and BEC, (ii) the broad area of Vocational Preparation in relation to the new MSC-sponsored YOP schemes. Significantly, the material generated by means of adaptive work for use on BEC programmes was case-study material to be used as a resource by students for the development of problem-solving skills, an emphasis which was very much at the heart of BEC's curricular initiative. Similarly, all 'adopted'/'adapted' materials emanating from reported cases of development work in relation to Vocational Preparation were intended as resource material for 'student-centred' programmes of work with individual students. Again the nature and content of the material generated by adaptive work reflected the explicit educational principles underlying YOP schemes and other similar programmes.

Although 'adopted'/'adapted' materials featured predominantly as student resource material, there were also some reported cases of the development of (student) learning materials for situations which involved varying degrees of self-study. Learning materials were, for example, generated by means of adaptive activity for use as self-instructional units in the context of TEC Level I in Engineering. These were used for remedial purposes - to enable a student to develop further understanding of chemical concepts and processes which had been covered in classroom/laboratory sessions, or to provide content which a student may have missed through being ill or through some other reason for absence. In view of the 'self-standing' nature of (student) learning materials, their use in self-instructional packs

designed for home-based study was clearly an appropriate and logical purpose for the adaptive activity.

Finally, there was some reporting of the development of teacher resource material through adaptive work. In the case of the Open University-sponsored scheme, this was an initiative that was intended to demonstrate to teachers the potential of certain Open University materials to meet the need in FE for suitable materials for the teaching of Social and Life Skills. The other two instances of note here arose in relation to new (in 1980/81) courses/programmes such as the CGLI Foundation courses. Groups of FE practitioners were, in some cases, asked to write 'Notes of Guidance' for other teachers involved in the implementation of these courses. These 'Notes' were often in the form of teachers' manuals which not only offered general information about the underlying philosophy and designated content of the courses, but also examples of learning activities/tasks and offered recommendations about appropriate teaching strategies/approaches.

The characteristics of the students for whom the resource/learning materials were developed varied according to the educational intentions of the courses/programmes. The students were noticeably very disparate in terms of their ability and particular needs, taken across the courses as a whole. Whilst, for example, the 'adopted'/'adapted' materials in the BEC and TEC courses were used with high or medium ability groups, those for the YOP schemes were intended for lower ability groups and sometimes for students with special educational needs - for example, those for whom English was a second language, or the mentally handicapped.

It is noted from Table 5.1 that the curriculum/resource materials used for adaptive purposes were drawn both from the FE sector itself, and from other education sectors - secondary, higher and adult. However, Table 5.2 overleaf extends and supplements the information in Table 5.1 by detailing the actual materials used for the adaptive work in terms of the three broad study areas previously identified.

In the first of these study areas - that of science-based Craft and Technology Studies, materials which had originally been designed for use by secondary school pupils featured very strongly. Materials from Nuffield and Schools Council funded curriculum projects of the 1960s and 1970s had been used to generate materials for both 'Traditional' Vocational/Technical courses (linked to TEC and CGLI awards) and for a full-time pre-employment course ('Software and Technical Documentation'). Use had also been made of curriculum materials from USA science projects and of resource materials such as those of the Association for Science Education (ASE) funded project, 'Science in Society'. One explanation for the use of school science curriculum materials was suggested by one of the respondents in the follow-up inquiry. This explanation emphasised the abundance of materials which had emanated from school-oriented staff development in schools in terms of acquiring new ways of conceptualizing and presenting science curriculum content. It also emphasised that no parallel development had taken place in FE. (Here, at that time, it was assumed that lecturers were flexible and abreast of industrial development and therefore there was no need for guidance.) As there was a requirement in Vocational FE courses for 'related science' (i.e., science relevant to the knowledge and skills needed to do a certain job) and for science that emphasised principles and applications (as opposed to a school emphasis on the

Table 5.2: Broad study areas in which adoption/adaptation occurred and the source of the 'original' materials used (1980/1981)

Broad study area	Target/orientation of 'original' materials	Name of 'original' materials
Science-based Craft and Technology Studies	(Secondary) school education	Industrial Arts Curriculum Project, Illinois: (sections relating to Industrial and Environmental Studies and to Industrial Skills and Practices).
		Nuffield Combined Science.
		Nuffield Secondary Science.
		Nuffield 'O' level schemes in Chemistry, Physics and Biology.
		Schools Council Integrated Science Project (SCISP).
		'Working with Science'
		'Science in the '70s'.
		CHEMstudy (USA).
		Nuffield 'A' level schemes in Chemistry, Physics and Biological Science.
		'Science in Society' (ASE-funded).
		'Science in a Social Context (SISCON)
	Further education	CGLI-level resources/materials in Photography and Graphic Design
	Adult education	Trade Union Studies materials (no details available)
		Tesco's publication 'Retailing in the '80s'.
General Studies	(Secondary) school education	'English in Need' (text-book/workbook).
		'Its Your Life: a Personal and Social Course' (resource and learning materials).
		Units from 'Groups', one of the major study modules of 'Exploration Man', Schools Council Integrated Studies Project.
	Further education	ILEA FE Curriculum Project for SLS Teaching (particularly 'Accident', 'A Spot of Bother', 'Living in the City' and 'Learning in a City').
		Wide range of published materials in SLS area for 14-16 year olds (no further details).
	Adult education	Open University Community Education courses (particularly 'First Years of Life' and 'Childhood 5-10').
		Open University (3rd level) Technology course, 'Food Production Systems' (T273), Unit 11 ('Consumer Behaviour').
Business Studies	(Secondary) school education	'CSE Commerce' and 'CSE Office Practice' (text books).
	Further education	Pitman Institute course in bookkeeping (text book).
	Higher education	'Management Principles' (course materials/handouts from MA taught degree at University of Hull).
		Institute of Marketing case-study materials ("Upton, Vance and Wells" and "Stones Plastics").

teaching on concepts), there was value in the adoption/adaptation of school-oriented materials for use as student resource materials in, e.g., TEC Engineering and CGLI Craft courses.

In contrast to the approach used with respect to adaptive work in the science-related area, such attempts which were reported as occurring in the General Studies/SLS area drew mainly on materials which had recently been published (or created by resource banks such as that associated with the ILEA Curriculum Project) specifically for the Vocational Preparation market. Whilst there was some reported use of school text-books and Schools Council project material, any adaptive work that occurred was related to 'gearing' materials even more closely to the needs and interests of individual students and to re-organizing learning activities so that they could be worked through at students' own pace.

The conclusions which may be drawn from the 1980/81 survey are integrated with those relating to the 1985 survey and discussed in Section 5.3 of this chapter. However, it is useful at this stage to list three points which dominate the findings, viz.,

1. Very little involvement in adoption/adaption as a strategy for curriculum development was in evidence in FE in 1980/81.
2. Adaptive work, where it was occurring, was confined to a few broad curricular areas and was being used mainly to create 'new' content areas or to introduce 'new' instructional approaches, particularly in the context of student target groups with 'special needs'.
3. Adaptive work in the Science-based Craft and Technology area was dominated by the use of 'original' materials from

school-oriented science curriculum projects. This may be seen as a reflection of the dearth of 'purpose-built' curriculum/resource materials for the FE sector and the abundance of such materials aimed at the secondary sector. In contrast, the General Studies/SLS area had been a target for the development of 'new', 'purpose-built' materials for use in the FE sector. This was seen to provide a reason for less use being made of school-oriented materials in any adaptive work that was occurring.

Section 5.2: The 1985 inquiry

As indicated in the introduction to this chapter, the 1985 inquiry had broadly the same purposes as the 1980/81 inquiry, viz.,

(i) to establish the incidence of adaptive curriculum work;

(ii) to collect information about the general nature of this work.

However, additional purposes may be associated with the 1985 inquiry. This second exploration of the extent to which adaptive work was being used as a strategy for curriculum development in FE, staged four years after the first 'probe' into this issue, was intended to identify any changes which might have occurred in that time interval. Moreover, it was possible in 1985, because of the different approach used for the conduct of the survey, to collect information about a wider range of questions relating to the general nature of adaptive work, than had been the case in 1980/81. In this sense, the information obtained from the 1985 inquiry was able to build upon, supplement and extend the base-line data collected in 1980/81 to establish a more 'rounded' view of the defining features of adaptive work in FE institutions.

The results of the inquiry into the incidence of adaptive work are reported here in the first subsection. Subsequent subsections present and discuss information relating to the general nature of adaptive work. The questions which guided the analysis of this latter aspect are as follows:

1. In what major subject/study areas was the adaptive work conducted?
2. In relation to which courses/programmes was the adaptive work carried out?
3. Who were the 'consumers' of the 'adopted'/'adapted' materials?
4. What type of material was produced by adoption/adaptation activity?
5. What were the sources of the 'original' materials used?
6. What was the general nature of the changes that were carried out?
7. How was the work organized within the college?
8. What problems/difficulties were encountered in carrying out the work?

It will be noted that Questions 1-5 above were pursued during the 1980/81 inquiry. Questions 6-8 above are, however, additional questions relating to practitioners' perceptions of adaptive work and to procedures/activities that may be associated with the conduct of adaptive work per se. The information relating to these questions is presented in further subsections under the following headings:

'Study areas/courses associated with adaptive curriculum work' (Questions 1 and 2)

'Purposes of adaptive work and sources of "original" materials' (Questions 3, 4 and 5)

'Organizing and conducting adaptive curriculum work' (Questions 6, 7 and 8).

Section 5.2.1: The incidence of adaptive curriculum work

In 1985, a questionnaire was sent out to all FE colleges in the British Isles to establish, in the first instance, whether curriculum development work of any kind, i.e., by adoption/adaptation, or by ab initio development, was currently taking place or had occurred in the recent past. In all, 499 questionnaires were sent out and 278 replies were received, which is a response rate of 56%. Of these 278 replies, only 8 indicated that they were not currently involved or had not recently been involved in some form of curriculum development work. Thus, 97% of the responding colleges indicated on-going or recently undertaken curriculum development work. This was obviously a greater response than had been achieved from the random population for the 1980/81 survey, although this 97% covered the range of strategies for curriculum development (ab initio development as well as adoption/adaptation) and the incidence of actual adoption/adaptation had yet to be ascertained.

An important task, therefore, was to establish whether these curriculum development initiatives were involving or had involved adoption/adaption. One of the questions from the first short questionnaire asked whether 'existing' materials had been used for the development work (a question designed to probe this issue), to which 194 of the 270 responded positively. Of the remaining 76, 31 responded negatively and 45 stated 'not known' (see Table 5.3 overleaf). Thus, it

appeared that of the colleges involved in curriculum development work, 72% were practising (or claimed to be practising) some kind of adoption/adaption work, either on its own as a curriculum development strategy or in combination with ab initio development. This reported incidence, however, was treated with some caution. In 82 of the 194 reported cases of 'positive' involvement in the use of 'existing' materials, the information provided in response to the remaining questions on the questionnaire was either extremely scant or there was a failure to provide the name of a 'contact' person for follow-up inquiries. In these circumstances, it made it impossible to verify the claim of involvement in adoption/adaptation work. Thus, for the purpose of further investigation, it was only possible to involve 112 colleges out of this 194 in the follow-up inquiry. This, as explained in Chapter 4, involved circulating a second questionnaire which was intended to probe the incidence of adoption/adaptation with rather more precision, and to find out more about the general nature of adaptive work. This second questionnaire was addressed to the 'contact person' named by the college principal who had completed the first questionnaire.

Table 5.3: Inquiry into use of 'existing' materials for curriculum development work (1985): responses from college principals

Positive response	Negative response	Responded 'not known'
194 (72%)	31	45

n = 270

The response rate to this second questionnaire was somewhat lower than that for the first questionnaire: 46 replies were received from the 112 sent out, registering a rate of 41%. Of these, 11 replied negatively to the question regarding the use of 'existing' materials in their development work (see Table 5.4 below). This was somewhat surprising because the college principal (who had been the recipient of the first questionnaire) had indicated that 'existing' materials were being used in that college for curriculum development work and that the named 'contact person' could provide further information. (This discrepancy may be explained either in terms of some lack of communication between the principal and the 'contact person', or some misunderstanding/lack of information on the part of the principal about the nature of the adoption/adaptation work occurring in the college. Alternatively, the principal or the 'contact person' may have interpreted the term 'use of existing materials' in different ways.)

Table 5.4: Inquiry into use of 'existing' materials for curriculum development work (1985): responses from designated 'contact people'

Positive response	Negative response
35 (76%)	11

n = 46

The remaining 35 respondents agreed that 'existing' materials were being used for the curriculum development work. However, this was a disappointing 31% of the total originally identified by college principals

as being positively involved in adoption/adaptation work. In this way what had initially appeared to be a high incidence of adoption/adaptation activity (7 colleges in every 10 according to responses given by college principals), fell dramatically, through the process of further 'sifting', to a genuine incidence of 31% (fewer than 3 colleges in every 10).

These figures confirmed the findings from the literature review presented in Chapter 2, viz., that adoption/adaptation, as a strategy for curriculum development, was largely being overlooked, and that its use in FE was minimal. This conclusion was disappointing in itself, but particularly so when viewed against the context of the significant amount of curriculum activity which, according to the figures, was taking place in FE in 1985. There were obviously many pressing curricular needs to be met but such needs were not being met through adaptive curriculum work.

Section 5.2.2: Study areas/courses associated with adaptive work

The first questionnaire asked respondents to identify, by course/programme, the areas in which curriculum development, whether by adaptive or ab initio strategies, was taking place or had recently taken place. In response to this, the 278 college principals who reported that curriculum development work was occurring in their colleges, identified between them a total of 965 courses/programmes. Of these, only 9 (or about 1%) could be categorised as AFE, leaving about 99% within NAFE.

These 965 courses/programmes have been categorized here into three broad groupings, viz.,

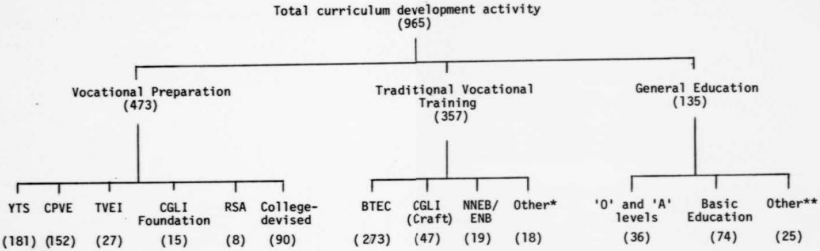
(i) Vocational Preparation (which, in 1985, included YTS, CPVE and TVEI schemes, as well as full-time pre-employment courses such as CGLI Foundation, RSA and college-devised schemes);

(ii) 'Traditional' Vocational Provision (i.e., the vocational/technical courses traditionally offered by the FE sector which, in 1985 were, e.g., BTEC, CGLI Craft courses, NNEB, ENB);

(iii) General Education (this, for present purposes, includes not only 'O' and 'A' level courses but also Basic Education courses, e.g., in Numeracy and Literacy).

Figure 5.2 overleaf demonstrates the distribution of the 965 courses/programmes within these three broad groupings and their associated sub-categories. From this, it is noted that about half the total curriculum activity reported by colleges was occurring within the Vocational Preparation area. Of the remaining 50% or so, a substantial part was being devoted to 'Traditional' Vocational Provision.

When the 35 genuine instances of adaptive work were abstracted from the total number of institutions reporting involvement in curriculum development work in general, it was noted that the courses/programmes in which 'adopted'/'adapted' materials had been used, totalled 57. This was because (i) some colleges were involved in more than one adoption/adaptation attempt and (ii) some 'adopted'/'adapted' materials were being used for more than one course (this was particularly evident in relation of YTS and CPVE schemes). In terms of the broad categories previously used to classify information, viz., Vocational Preparation, 'Traditional' Vocational Provision and General Education, 28 courses/programmes were in the Vocational Preparation area, 25 in the 'Traditional' Vocational Provision area and 4 in the General Education



Notes: The figures in brackets refer to the total number of courses within each category.
* Includes, e.g., Vocational CNAA degree awards and courses sponsored by Training Boards.
** Includes, e.g., courses for students with specific needs (ethnic minorities, hearing-impaired, visually or mentally handicapped).

Figure 5.2: Reported areas of curriculum development work (ab initio and adoption/adaptation) in terms of broad type of educational provision, and course/programme (1985)

area. This information is presented in Table 5.5 below. As a microcosm of the 955 courses/programmes identified with curriculum development in general, these figures, not surprisingly, produce a broadly similar profile to that reflected in Figure 5.2.

Table 5.5: Number of courses/programmes in which 'adopted'/'adapted' materials were used in terms of broad types of educational provision (1985)

Vocational Preparation	'Traditional' Vocational Provision	General Education
28	25	4

n = 57

Within these broad areas of educational provision, a great deal of variety was in evidence in terms of (i) the different courses/programmes which had involved adaptive curriculum work and (ii) the different study areas to be associated with these courses/programmes. This diversity is reflected in Figure 5.3 overleaf. In this, a breakdown of areas where adoption/adaptation was taking place (in 1985) is attempted which is similar to that used in Figure 5.1 for the 1980/81 survey data. i.e., by broad area of educational provision with associated sub-divisions by qualification/validating body and specific study area. However, some changes in the classification were necessary so as to reflect developments which occurred in the four intervening years. Those of note for present purposes are the

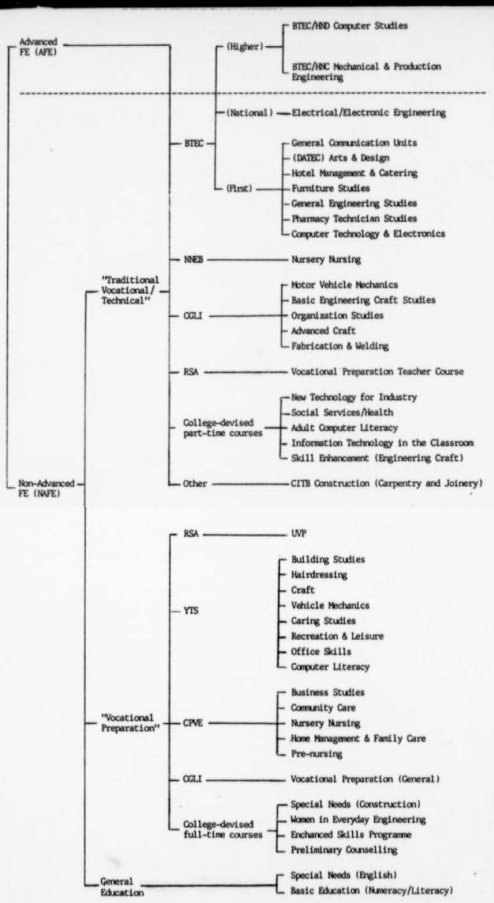


Figure 5.3: Different types of scheme in which 'adopted'/'adapted' materials were used (1985)

amalgamation of TEC and BEC into BTEC, the phasing out of YOP schemes and the establishment of YTS and CPVE programmes.

It is noted from Figure 5.3 that the diversity of study areas in which adaptive work had been carried out was particularly noticeable in relation to BTEC, CGLI, YTS and CPVE. The achievement of diversity was facilitated by involvement in 'multiple' curriculum activities, mentioned above, which embraced a range of different courses/programmes. Thus, e.g., a Motor Vehicle section within an Engineering department of one college was involved in a Motor Vehicle option in a YTS scheme, the development of Computer-Assisted Learning (CAL) with respect to Motor Vehicle Theory, and with school-linked courses in Motor Vehicle Studies. In this particular situation, the curriculum developer drew on a particular set of previously used materials (CGLI Motor Vehicle units) and adopted/adapted them to suit the perceived requirements of each course respectively.

It is not possible to classify quantitatively, as was the case with the 1980/81 survey data, the 57 courses identified with adaptive work in terms of their principal study areas. This is because, in a number of cases, the adaptive work covered more than one study area. This occurred most frequently in adaptive work relating to Vocational Preparation provision. Thus, adaptive work relating to one YTS scheme involved, e.g., the adoption/adaptation of materials for (i) different aspects of the pre-nursing component of that scheme, (ii) another component of the same scheme which might broadly be classified as 'Social and Life Skills'. Nevertheless, it is clear from a qualitative appraisal of the courses/programmes and their respective components that the broad study areas identified in the 1980/81 survey data relating to adaptive activity, viz.,

1. Science-based Craft and Technology Studies
2. General Studies/SLS
3. Business and Management Studies

were in evidence in the 1985 data. Moreover, two further categories, in relation to which adoption/adaptation was being practised, were discernable, viz.,

4. Information Technology (which featured predominantly Computer Studies/Computer Literacy)
5. Nursing and Caring Studies (e.g., pre-nursing, community care, home management, nursery nursing).

The emergence of 4. and 5. above was seen as an indication of two 'new' areas of curricular provision in 1985.

Section 5.2.3: Purposes of adaptive work and sources of 'original' materials

In terms of the classification of materials offered in Chapter 3 of this study (which groups curriculum/resource materials according to the different purposes for which they may be used), many curriculum developers claimed to be involved in the development of materials for both teachers and students. The main 'outputs' were however in terms of student resource and learning materials where there was a demand within all five broad study areas previously identified (Science-based Craft and Technology Studies, General Studies/SLS, etc.). Particularly significant was the frequent reference to the generation of learning materials by adaptive work for what may broadly be referred to as 'independent programmes', notably Open Tec, Flexi-study, Computer-Assisted Learning (CAL) and college-devised open learning/self-study units. CAL featured not only in the area of Information Technology but also in Science-based Craft and Technology

Studies, whilst college-devised self-study units were often mentioned in relation to initiatives within the Vocational Preparation area. There appeared, therefore, to be some evidence that, in 1985, in the face of pressures for 'student-centred', 'self-pacing' learning approaches, adoption/adaptation was being used to effect changes in teaching/learning procedures.

The development of 'independent programmes' in relation to schemes/programmes within the Vocational Preparation area were often intended for student target groups with 'special needs'. These were, e.g., students from ethnic minority groups who needed help with basic literacy, or handicapped students (mentally and/or physically) who required study materials tailored to meet their own, individual needs. In the 'Traditional' Vocational Provision area, the demands for re-training and skills enhancement/updating was reflected in a growth of programmes in Information Technology and in short courses in particular specialist skills.

Investigation into the sources of 'original' materials revealed that a very limited range was being used for the 57 courses which could be associated with genuine attempts at adaptive work. A single source of materials was often cited, and certainly no more than two sources were indicated for each adoption/adaptation attempt. Moreover, the 'adopted'/'adapted' materials were frequently used for more than one 'new' course/programme. What was particularly striking was the fact that, almost without exception, the 'original' materials used for the adaptive work emanated from within the FE sector and were usually materials that curriculum developers had already used in the teaching of other FE courses. Thus, in one college which claimed to be offering a number of vocational options - on its YTS programme, CPVE courses,

adult retraining courses and Basic Education (literacy and numeracy) courses - the 'original' materials which were 'adopted'/adapted' were those previously used on CGLI Foundation courses. In another college which was offering Office Studies/Skills as a YTS option, BTEC materials developed in other FE colleges were being used.

Table 5.6 overleaf offers a profile of a number of typical cases of adaptive work in 1985 which is intended to highlight the sources of 'original' materials used and the type of material produced. The information in this table reveals the very marked tendency, on the part of curriculum developers, to adopt/adapt materials which were originally produced mostly by ab initio development, for other FE courses. From this a number of typical 'patterns of use' may be identified in which materials produced originally for

(i) CGLI Craft Studies were used for YTS programmes offering Craft options;

(ii) TEC (General and Communication Studies) and BTEC (General Studies) were used for the Social and Life Skills component of CPVE and YTS schemes;

(iii) BEC (General) were used in YTS Business Studies options;

(iv) College-devised courses related to Nursing were used for YTS and CPVE Caring options and for other broadly health-oriented programmes.

This provided evidence for the conclusion that the need for curriculum/resource materials in the fast-growing area of Vocational Preparation was being met, in many instances, by the 'transfer' of materials from 'Traditional' Vocational courses in FE. Staff who had been involved in the 'first wave' of curriculum developments following the establishment of BEC and TEC, and who had designed and produced

Table 5.6: Summary information relating to typical instances of adaptive curriculum work (1985)

Name/type of course	Subject/study area	Type of material produced	Source of 'original' materials
(i) YTS (Building Studies (ii) CITB (Carpentry and Joinery)	Science-based Craft and Technology Studies	Student resource and teacher resource	Materials produced (by ab initio development) for CGLI Foundation (Construction)
Skill Enchancement (Engineering Craft Studies)	Science-based Craft and Technology Studies	Student resource	Materials produced (by ab initio development) for CGLI Basic Engineering Craft Studies (Part I)
YTS (Vehicle Mechanics)	Science-based Craft and Technology Studies	(Student) learning (CAL) and teacher resource	Materials produced (by ab initio development) for CGLI (Vehicle Mechanics; Vehicle Parts Personnel; Vehicle Bodywork)
BTEC (Pharmacy Technician Studies)	Science-based Craft and Technology Studies	Student resource	Materials produced (by ab initio development) for CGLI Pharmacy Technicians
(i) Several CPVE courses (ii) Several YTS programmes	General Studies/ Social and Life Skills (special needs)	Student resource and (student) learning	Materials produced (by ab initio development and adaptive work) for TEC (General and Communication units)
CGLI Vocational Preparation (General)	General Studies/ Social and Life Skills	Student resource and (student) learning	(i) Materials produced (by ab initio development and adaptive work) for BTEC (General Studies units) (ii) Regional Curriculum Bank
Several YTS programmes	General Studies/ Social and Life Skills	Student resource	(i) Shell Business Game; (ii) Materials produced (by ab initio development) for BTEC (General Studies units)
YTS 'Off-the-Job' Training (Office Skills)	Business Studies	Student resource and teacher resource	Materials produced (by ab initio development) for BEC (General) and Pitman/RSA/LCCI/ULCI Office Studies/Skills
(i) BTEC Computer Technology and Electronics (ii) Short Course Programmes for Industry in New Technology (college certificate)	Information Technology	(Student) learning	(i) FEU Computer-Aided Design materials (ii) Materials produced (by ab initio development) for CGLI Robotics
(i) YTS (Computer Literacy) (ii) Adult Computer Literacy (college certificate)	Information Technology	(Student) learning and teacher resource	FEU Computer literacy materials
YTS (Caring Studies)	Nursing and Caring Studies	Student resource	Materials produced (by ab initio development) for Certificate of Further Education (Pre-Nursing and Caring)
(i) CPVE (Caring Studies) (ii) NNEB Nursery Nursing (iii) Short courses for Local Health Authority	Nursing and Caring Studies	Student resource	Materials produced (by ab initio development) for (i) Pre-Nursing course (college certificate) (ii) Diploma in Nursing, Part A (University of London)

programmes and associated materials, were often the same staff who were, in 1985, responding to the demands of YTS and CPVE. It was confirmed in follow-up inquiries that these staff saw the opportunity of re-using these BEC/TEC 'products', in an adapted form, in the Vocational Preparation area.

There was only one instance of school-oriented material being used in any of the adoption/adaptation attempts. The tendency was, instead, to draw upon materials, the characteristics of which were already familiar. These materials were likely to have been produced by the same curriculum developer(s) or by his/her colleagues for courses or target groups perceived as being in some way roughly equivalent to those for which the 'new' need arose. Alternatively, materials available at a regional level or produced by national bodies such as the FEU and the Training Boards which had been designed to meet specific curriculum needs in FE and which were readily available to staff in colleges, were used.

There was therefore little evidence, in 1985, that FE staff practising adoption/adaptation looked beyond their own immediate experience to identify and locate sources of 'existing' materilas from other educational sectors. The follow-up inquiries revealed that curriculum developers either did not perceive the need to become involved in a systematic search for suitable materials beyond those with which they were already familiar, or that pressures of time precluded this type of activity. A recurrent explanation offered too was that, in the Vocational Preparation area particularly, there were plenty of suitable, or near-suitable curriculum/resource materials available within FE colleges.

In the main, curriculum/resource materials were chosen because their study content seemed appropriate (with or without modification) for a particular target group for a new course/programme. Thus, in making selections from 'existing' materials, compatibility, or near-compatibility of content appeared to be the overriding criterion. The majority of changes made were similarly 'content-focused' and were carried out mainly to emphasise a particular orientation, to increase or decrease the cognitive demands made on students or to update material. There was, however, some evidence to suggest that additionally, adoption/adaptation was being used to change the way in which materials were to be studied. There were, for instance, 11 references to the use of adaptation for the purpose of achieving "a more student-centred approach to learning", or for 'independent' (self-study) learning. Such references occurred largely in the context of YTS and CPVE programmes, particularly in relation to target groups with 'special needs'.

Section 5.2.4: Organizing and conducting adaptive curriculum work

The 1985 survey included questions about the organization of the adoption/adaptation and about problems which might have been met whilst carrying out the work. Of interest here was to find out whether the curriculum development work was carried out (i) by a specially-constituted course team of individuals with expertise in curriculum development on behalf of a 'wider population' or (ii) by individuals, either working on their own initiative, or in collaboration with colleagues, for the development and implementation of their own courses and associated materials. Of interest, too, were the perceptions of practitioners about the success or otherwise of their efforts.

There were some cited instances of the creation of 'special' curriculum development teams. These occurred in situations where a department or section of a college was required to produce courses in a new area (e.g., for YTS or CPVE). In each of these reported cases, the pressure to design courses and produce materials was used as an opportunity for a staff development exercise in curriculum development. However, in none of these instances was a 'special' team created for the express purpose of carrying out adoption/adaptation as a staff development exercise. Where adoption/adaptation procedures were used, these 'happened' as a result of pragmatic rather than pre-planned considerations. The idea that adoption/adaptation, as a strategy for curriculum development with its own distinctive characteristics and procedures, might offer an opportunity for staff development, was apparently not considered. Whilst there were references to the creation of 'special' curriculum development teams, the majority of respondents claimed that they had carried out their own development work for their own courses, although, in most cases, they were working alongside colleagues similarly engaged in the same course/programme.

The dominant assumption underpinning most of the development work was that FE staff were responsible for the design of courses on which they personally taught (mostly this occurred within a curriculum framework laid down by an external body) and for the production of their own curriculum/resource materials. Whether this phenomenon was attributable to a dominant ethos which stressed the personal autonomy of tutors vis à vis "their" courses or whether this was a function of inadequate resources for, or interest in, curriculum development as a formally-managed, systematic exercise, is difficult to determine: the result was, either way, the dominance of a style which emphasised 'curriculum developers-as-implementers'. This meant that the way in

which curriculum development was organized, and, importantly, the use made of adoption/adaptation and the nature of its process, was very directly linked to the curriculum development expertise of individual members of staff.

When asked to report on difficulties experienced with adoption/adaptation, respondents made reference to implementation rather than development issues. Whilst some commentators stated that, for example, adaptation had been "time-consuming" or that "there was inadequate time for development work", most of the difficulties which were articulated focused on the characteristics of the 'adopted'/'adapted' materials themselves, or on qualities of the 'user group(s)'. For instance:

> "... Students are not used to independent learning".
>
> "...The conceptual steps taken in the ['new'] material were too large".
>
> "...It was difficult to develop material for the profusion of different abilities and the different needs of students".

In the few cases where the developers constituted a different group from the implementers, there was some expressed dissatisfaction:

> "Staff lack expertise in developing student-centred methods ..."
>
> "The ['adopted'/'adapted'] materials do not always fit the teaching style of individual teachers."

These comments reflect problems which may be encountered in the conduct of any type of curriculum development work: they shed little light on the problems which may be exclusive to adoption/adaptation. This again may be a function of the way in which adoption/adaptation was conceptualized, i.e., not as a distinctive curriculum development strategy but as a pragmatic response which, with its emphasis on using

what already exists, has operational value when resources such as time, money and curriculum expertise are perceived as scarce or inadequate.

Section 5.3: Conclusions

The empirical work conducted in 1980/81 and in 1985 threw into relief several methodological and conceptual problems involved in investigating a phenomenon - in this case, curriculum adoption/adaptation as a strategy for curriculum development - which does not enjoy a formally-recognized or established 'reality' in the minds of most curriculum developers. This absence of recognition is reflected in, or alternatively, a function of, the dearth of information in the available literature (as evidenced in Chapter 2) and/or any attempts to establish an awareness of its potential through 'managed' activity such as staff development programmes in colleges (as evidenced in this chapter). Unaided by a body of knowledge about curriculum adoption/adaptation, the effect of which would validate and legitimate its reality as a way of responding to 'new' curriculum/course needs, and as a means of generating 'new' materials, the term 'curriculum development' remains synonymous, as far as the majority of practitioners is concerned, with ab initio development.

This particular situation posed a number of difficulties for an inquiry, which in this particular case, was directed towards investigating the incidence and general nature of adoption/adaptation attempts. These may be summarized as follows:

1. There is no established vocabulary for communicating about adoption/adaptation issues. This, in interaction with the recognized disadvantages of postal questionnaires, resulted in difficulty on the part of respondents to the 1980/81 questionnaire in applying the

definition of 'adoption' or 'adaptation' to their activities. In order to avoid this situation in 1985, the questionnaire did not ask respondents to impose definitions but instead asked them to describe their activities in relation to 'existing' materials as involving 'little or no change', 'moderate change' or 'substantial change'. However, follow-up inquiries revealed that there were again wide variations in the way in which these terms had been applied. Only through further questioning about the number and range of changes made, or through examination of the 'adopted'/'adapted' materials, could any realistic understanding about the extent or scale of any changes be established.

2. The postal questionnaires were necessarily 'filtered' through or 'mediated' by college principals before reaching (or sometimes not reaching) the member of staff in the college capable of helping with the inquiries. Whilst this is a hazard of any questionnaire following a similar route, this presents particular difficulties for accessing information when the phenomenon under investigation does not enjoy an established importance and recognition. It is significant, on the other hand, that the first questionnaire of the 1985 survey which was overtly an investigation into 'curriculum development' - a term which enjoys a widely-recognized meaning and status as a educational activity - produced a high response rate.

Despite the methodological and conceptual difficulties which underpinned the conduct of the 1980/81 and 1985 surveys, it was clear that the incidence of adoption/adaptation as a strategy for curriculum development in FE colleges, up until and including 1985, was low. This confirmed the impression gained from informal inquiries conducted prior to the 1980/81 survey and was re-confirmed and re-inforced by the findings of the 1985 survey. Quantitative pronouncements on this issue

are difficult. This is due to the differing modes of distribution used for the questionnaire and because of the methodological difficulties outlined in Section 5.2.1 concerning the separation of those cases which reported curriculum development in general from those relating specifically to adoption/adaptation.

However, the findings of the 1985 survey provided no grounds for challenging the earlier findings of the 1980/81 survey which indicated that only about one college in five could lay claim to using adoption/adaptation procedures for curriculum development. The 1985 survey highlighted the very substantial involvement of colleges in curriculum development and this again served to emphasise how little use was being made of adoption/adaptation to meet 'new' curriculum needs. Broad subject/study areas which had emerged as categories of curriculum development activity in the 1980/81 survey - Science-based Craft and Technology Studies, General Studies/SLS components of both 'Traditional' Vocational Training and Vocational Preparation programmes, and Business and Management Studies - demonstrated that they continued to be foci of curriculum development activity in 1985. By this time, however, two further categories were assuming significance - those of (i) Information Technology (ii) Nursing and Caring Studies.

It was noted that in 1985, about half the total curriculum development effort was focused in the Vocational Preparation area whilst much of the remaining 50% of activity was in relation to 'Traditional' Vocational Provision. The Vocational Preparation area was dominated by YTS and CPVE initiatives, whilst the Vocational Training area was characterized by developments under the broad umbrella of BTEC. Other significant features of the curriculum development scene in 1985 was the growth of activity in respect of 'independent study programmes' (using open

learning, self-study, computer-assisted methods) and the emphasis on 'student-centred' learning, particularly in relation to student target groups with 'special needs' (ethnic minorities, mentally or physically handicapped, and adults lacking basic literacy and numeracy skills).

Curriculum situations in which adoption/adaptation was attempted in 1985 were microcosms of the broader curriculum development scene represented by the findings of the first questionnaire of that year. The same broad study/subject areas represented the loci of adoption/adaptation activity. Three of these five broad areas had featured also in the 1980/81 survey; this served to re-confirm Science-based Craft and Technology studies, General Studies/SLS (as part-courses) and Business and Management Studies as significant areas for curriculum development. Similarly, it was noted that, in 1985, colleges were involved in 'multiple' curriculum development activities (278 colleges reported involvement in a total of 955 courses/programmes). This was again evidenced in the second questionnaire of 1985 which yielded more detailed information about the curriculum activities of the 35 colleges which claimed to be using adoption/adaptation (in a total of 57 courses/programmes).

On the basis of an examination of the 13 cases of adoption/adaptation attempts in 1980/81 and the 35 reported instances arising from the 1985 survey, it appeared that whilst some teacher resource material had been produced to help tutors with the requirements of 'new' courses (or elements of 'new' courses), the predominant concern had been to provide student resource material. This featured strongly in the General Studies/SLS area in 1980/81 and across the whole area of Vocational Preparation in 1985. In both instances, tutors were faced with the need to have available large amounts of resource material for

student-centred, often individually negotiated study programmes, particularly in relation to YTS and CPVE schemes. In 1985 also, it was noted that both student learning and resource materials were being produced for adult training and re-training, particularly for short specialist courses in certain industries - all using adoption/adaptation as the major means of generating 'new' material. Some of these courses that were 'angled' towards 'special needs' groups were using the materials in 'independent learning' packages. Generally, therefore, in 1985, the materials produced by adoption/adaptation covered a broader spectrum of purposes than in 1980/81.

The majority of adoption/adaptation attempts had been carried out by tutors for the purposes of their own teaching which placed the tutors in the combined role of 'curriculum developers-as-implementers'. There were some cited instances of curriculum materials being developed by a specially-convened group of tutors which had proven expertise in curriculum development work but in only one case was such a team constituted for the express purpose of practising adoption/adaptation. This exception was the group of FE teacher trainers who featured in the 1980/81 survey as being responsible for the development of CGLI teacher resource material, using 'existing' materials from school-oriented Nuffield and Schools Council science curriculum projects.

As a general rule, practitioners of adoption/adaptation had come to use this strategy because they had confidence in a particular set (or sets) of curriculum/resource materials which were perceived as having effectively met some previously-experienced course/curriculum need. Thus, the 'existing' materials used for adaptive work were, to a large extent, a function of tutors' previous teaching experience, as opposed to formal and deliberate exposure through, e.g., staff development

programmes on the topic of adoption/adaptation as a strategy for curriculum development. FE tutors who had previously taught in schools were in a position to 'import' into the sector knowledge and experience of school-oriented materials. However, among FE staff who had not come into contact with influences other than those within the FE sector itself, there was a marked tendency to look no further than immediate past experience when seeking 'existing' materials for use in 'new' courses/programmes.

The use of materials originating outside the FE sector was not only shaped by professional circumstances and career patterns: it was also in part, determined by what was currently available inside the FE sector. Already by 1980/81, the commercial market offered an abundance of material in the SLS area and by 1985, national bodies such as the FEU and regionally-established resource banks were providing many resources for use in the vast growth area which had come to be known as Vocational Preparation. Given these favourable conditions, curriculum developers, perhaps understandably, perceived no need to seek materials outside and beyond the confines of the sector. In these situations, materials originally produced for one section of FE work (often the 'Traditional' Vocational Provision area) were 'transferred' and modified for use, usually in the Vocational Preparation programmes. The main thrust of adaptive work was therefore directed towards modifying materials already oriented to a FE clientèle. This situation may be contrasted with that pertaining in 1980/81 where there was apparently a dearth of materials in 'related science' for traditional vocational courses in Science-based Craft and Technology Studies. It is unsurprising that, against such a context, a group of teacher trainers, knowledgeable about the Nuffield and Schools Council science curriculum project materials, was engaged in the

large-scale modification of school-oriented materials for use in FE.

There was little evidence of rational or systematic principles underlying the approach to adoption/adaptation. Curriculum developers applied intuitively-derived notions of the needs of their students and of what counted as relevant and appropriate study content to the process of selecting from a 'pool' of available 'existing' material. The immediate concern was to identify material which required little alteration, i.e., to adopt. When this was not possible, modifications were made. However, in situations where the chosen 'existing' material did not adequately fulfil the course/curriculum need (as in the case of perceived deficiencies in the material such as absence of essential content or redundancy), no attempt was made to search for, and 'track down' alternative materials.

The 1980/81 and 1985 surveys provided a number of important insights into the general nature of adoption/adaptation work in the FE sector. The chapter which follows builds on this understanding by analysing, in depth, a number of cases of adoption/adaptation in practice.

CHAPTER 6: IN-DEPTH ANALYSIS OF CASE-STUDY MATERIAL (I)

Section 6.0: Introduction

The description and explanation of the research design offered in Chapter 4 of this study discussed the two parts of the fieldwork. The incidence and general nature of adoption/adaptation attempts in FE was the subject of Part I, the findings and conclusions from which were presented in the previous chapter. Part II of the research activity, however, was concerned with the special examination of a number of available cases of adoption/adaptation attempts within the theoretical framework explained in Chapter 3. The purpose of this chapter is to present the analysis of these case-studies and thereby explore the decisions which were taken during the adoption/adaptation activity, the considerations which had a bearing on the decisions and the procedures used to carry out the work. Moreover, by using the framework as a 'gauge' or 'reference', statements may be made about which decisions were not taken, which factors were not considered and which actions did not occur.

The analysis of adoption/adaptation decision-making in Chapter 3 was located within a predominantly theoretical framework which highlighted a number of major decision-making issues concerning the choice of adoption/adaptation as a strategy for curriculum development procedures for choosing, analyzing and evaluating curriculum/resource materials and actions relating to the process of adaptation per se. For the purpose of analyzing actual adoption/adaptation attempts, it was considered useful to formulate a set of questions which focus on the specific issues relating to these broad areas. The following, therefore, are the questions which are addressed to the case-study material:

1. How, and under what circumstances was the decision to adopt/adapt arrived at?
2. What factors influenced the choice of the curriculum/resource materials used for the adoption/adaptation work?
3. What criteria were used for judging the appropriateness of these materials?
4. What were the various conditions to be met/satisfied by the 'new' materials?
5. What characteristics could be associated with the curriculum/resource materials chosen for the work?
6. What actions/changes would theoretically have been desirable?
7. What were the actual actions/changes that were recognized as necessary, and which were 'bypassed' or circumvented in some way so as to remove potential 'mismatch'?
8. What, in brief, were the main adaptation activities actually undertaken?

The case-study material is presented case by case in such a way that the analysis is 'anchored' to the main decision issues. Each case is prefaced by a brief introduction which contextualizes the adoption/adaptation attempt and which, in pointing to some of its distinctive aspects, provides a rationale for its inclusion for analysis purposes. Information concerning the 'key' decision issues is then presented, discussed and evaluated under sub-headings which are derived from the questions listed above. These sub-headings (and the questions to which they are linked) are as follows:

The decision to adopt/adapt (Question 1)

Factors influencing the choice of 'existing' materials (Question 2)

The appropriateness of 'existing' materials (Question 3)

Adaptation decisions and strategies (Questions 4,5,6,7 and 8 but see following paragraph for further elaboration).

Finally, at the end of each case, a brief resumé is given of the salient features of the adoption/adaptation decisions and actions.

Each case-study is accompanied by a 'grid' (or matrix) which offers, in tabular form, information relating to Questions 4, 5, 6, 7 and 8 (here a 'telegramme' style has been adopted in order to reduce further the volume of prose). More specifically, the grids provide

(i) descriptive data relating to the characteristics and conditions of (a) the 'existing' materials (Question 4) and (b) the 'new' materials (Question 5);

(ii) an analysis of the actions/changes which (a) from a theoretical point of view, would have been desirable (Question 6) and (b) were actually recognized as necessary (see Question 7).

Each grid therefore is the 'match/mismatch' matrix which was presented and discussed in detail in Chapter 3, appropriately extended for the purpose of application to, and analysis of the case-study material.

The information provided in the grids informs the further analysis and evaluation presented under 'Adaptation Decisions and Strategies' for each case. Here, the content, timing and characteristic features of the decisions taken, and the procedures/activities actually carried out in the conduct of the adaptive work, are appraised and discussed from a rational/systematic point of view. This serves to identify those decisions and actions which were 'bypassed' or circumvented (see Question 7), or simply not given consideration. As such, it

demonstrates the extent (or otherwise) to which adaptive work in practice is characterized by rationality.

As indicated above, a 'case-by-case' approach is adopted for the presentation of the analysis. The advantages of such an approach are that it

(i) highlights the significant, interesting and instructive features of the case;

(ii) illustrates the causal connections and 'cross-relationships' to be made between different dimensions of the decision-making process in relation to each case.

However, it is recognized that this approach does not readily permit one case to be compared with another, or allow, in as far as it may be possible, more general conclusions to be arrived at from an overview of all the cases (or a number of different cases). A more global and comparative analysis of this kind is therefore the subject of the following chapter (Chapter 7).

The cases presented here have been very broadly categorized by subject/study area and ordered as follows:

General Studies/Social and Life Skills/Basic Education

Science, Mathematics and Technology

Business Studies.

Table 6.1 overleaf gives outline details of the cases falling within each category in terms of the year in which the adaptive curriculum development work took place and its purpose/topic.

TABLE 6.1: Profile of cases presented for analysis in terms of broad subject/study area, year and purpose/topic of adaptive curriculum development work.

CATEGORY	CASE	YEAR	PURPOSE/TOPIC OF ADAPTIVE CURRICULUM DEVELOPMENT WORK
General Studies/ Social and Life Skills/Basic Education	A	1980	General and Communication Units for Diploma in Hotel Catering and Institutional Management (TEC, Levels I and II): historical, social and economic forces shaping the food and beverage industry in Britain.
	B	1981	College-devised course in Social and Life Skills: stigma and prejudice, with particular reference to race.
	C	1981	College-devised courses in Social and Life Skills/Basic Education: letter-writing, job application, social relationships, communication.
	D	1984	Teacher development materials for in-service, FE staff development programmes: curriculum negotiation skills.
Science, Mathematics and Technology	E	1979	College-devised/MSC-sponsored course; 'Software and Technical Documentation': impact of scientific thought and technological advance on society and social processes, with particular reference to information technology.
	F	1969	College-devised 'Foundation' course in Chemistry, Physics, Biology and Mathematics: topics relevant for subsequent courses leading to CGLI Craft and Technician awards.
	G	1972-1980	(i) 'H' Grade Certificate course in Chemistry (topic details not known). (ii) OND/ONC Engineering (Chemistry): energetics, equilibrium, acids and bases, chemical calculations. (iii) TEC, Levels I and II in Engineering (Chemistry): energetics, equilibrium, acids and bases, chemical calculations.
	H	1985	Component of CGLI in Basic Engineering Craft Studies (Part I): servicing of ball and roller bearings.
Business Studies	I	1980	BEC(National) Diploma: 'cross-modular' materials for writing of assignments.
	J	1980	BEC(General) Diploma (Numeracy and Accounting): business calculations, aspects of office practice, bookkeeping.

Case A

1. Background information

The setting for this adoption/adaptation attempt was the Catering Department within the Faculty of Business and Management Studies of a large College of Arts and Technology. The establishment of the Technicians' Education Council (TEC) had led to the introduction of new courses/programmes, one of which was the Diploma in Hotel Catering and Institutional Management (Levels I and II). The college was required to develop materials on the basis of educational intentions laid down by TEC into goals and objectives for the General and Communication Studies components of this programme, and to develop the college's own units within this component. It is in relation to the development of one of these units that the adoption/adaptation activity took place.

The tutor in charge of the development of the General and Communication Studies units approached the task from a knowledge and value position favourable to the adoption/adaptation of 'existing' materials. This had been established through involvement in a college-based, curriculum-led staff development exercise in which the 'facilitator' had encouraged the perusal of 'existing' material for possible adoption/adaptation, instead of immediately embarking upon ab initio development. On the strength of this the tutor had familiarized herself with sets of curriculum/resource material held in the college's two libraries in the area of food and beverage.

It will be noted from the grid information relating to this case that the 'new' materials were to be used in three two-hour teaching/learning

sessions with additional time for private study by the students. This small allocation of time to this particular aspect of the course hardly defines this adoption/adaptation exercise as a major one. Nevertheless, it is included for analysis and discussion here because it demonstrates how and why decisions may be changed during the adoption/adaptation process per se.

2. The decision to adopt/adapt

The tutor weighed up the possibilities and advantages of adoption/adaptation against those offered by ab initio development and decided that adoption/adaptation would be a more sensible strategy because (i) time for the development work was limited; (ii) ab initio development put greater demands on curriculum expertise. The decision to adopt/adapt was therefore an informed choice, even though the range of possibilities and advantages considered may appear limited.

3. Factors influencing the choice of 'existing' materials

The tutor again consulted curriculum/resource materials in her own possession and in the college libraries but did not extend the search to directories, inventories and other sources of information. However, at the suggestion of her husband who was studying with the Open University (OU), she engaged in a brief examination of a unit entitled 'Consumer Behaviour', part of the third level Technology course 'Food Production Systems' (T273) which he had to hand, and decided to use it for the 'new' requirement. The choice of the OU unit, following a limited and fruitless search, may therefore be described as a piece of 'serendipity', rather than as 'informed'.

4. The appropriateness of 'existing' materials

The brief scrutiny of the OU unit focused solely on its subject matter and it was on the basis of rough comparability between this content and that anticipated for the 'new' programme that the decision about the suitability of 'Consumer Behaviour' was made. No systematic 'matching' was carried out between features of the two sets of material (those in existence and those to be developed) and therefore no comparison was carried out involving, e.g., the type of material, the characteristics of the target population, the organization and sequencing of content, learning outcomes, teaching approaches/types of learning experience. It appeared that the tutor's relief in finding a set of materials "which could be used in some way" (quote) inhibited reflective thinking about the large number of key features of the 'existing' material and about the likely effects of transposing these into a 'new' educational setting. Thus, not only was the decision about 'suitability' taken on the basis of scant evidence but also no apparent thought was given to the feasibility of using this particular unit of material.

5. Adaptation decisions and strategies

The grid relating to this case (see pages 159-160) demonstrates that the tutor had given some thought to the type of material to be produced, to the characteristics of the target population and to the nature of the subject matter for the 'new' course. However, no decisions were taken at the planning stage about a number of key features of this 'new' course, notably the teaching approaches, types of learning, the organization of content and the sequencing of content (see B4 and B6 in the grid). The decision about teaching approaches/types of learning experience was only taken after the original decision to produce

Table 6.2: Application of 'match/mismatch' matrix to Case A

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Open University (3rd level) course 'Food Production Systems (T273) Unit II, 'Consumer Behaviour'. Highly-structured learning material designed for home-based study, including information items, activities, self-assessed questions (with model answers) and extensive instructions about the process of study.	Adult, honours degree level, high ability.	Food habits; diets of different cultures; factors affecting diet (viz.,economic, emotional, cultural, symbolic). Integrated content involving synthesis of aspects of Social Anthropology, Sociology, Economics and Nutrition.	Content presented as themes within which particular issues/problems are explored. Sequencing clearly defined and non-negotiable.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Originally intended as learning materials. Subsequently changed to (i) teacher resource material (lecture notes) (ii) student resource material (worksheets and discussion exercises).	TEC Diploma (Levels I and II), 16+, post 'O' level, medium/high ability.	Broad area: General and Communication Studies. Specific area: historical, social and economic forces shaping the food and beverage industry in Britain. No further information given.	No consideration given to either the organization of content or its sequencing.
THEORETICALLY DESIRABLE ACTIONS/CHANGES C	Remove from 'existing' material those aspects which facilitate student control over learning and replace with tutor-devised structure, e.g., remove (i) in-text instructions to students; (ii) self-assessed questions;(iii) in-text activities. Re-write aspects which give overt recognition to a home-based study context.	Reduce cognitive demands on students. Delete/modify aspects of content of a specialist nature which assume a greater prior experience and expertise in the study area.	Rejection of anthropological subject matter concerning diets of different cultures. Selection of topics/information relating to food habits and factors affecting diet.	Consider carefully the implications for the intellectual coherence of the materials of 'fragmenting' them into components which are not held in relationship with each other through a clearly determined sequence.
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D	Changed original intention because of perceived difficulty/non-feasibility of adaptation task of converting materials into learning materials for classroom-based study.	Distinguish between aspects of content placing 'excessive' cognitive demands and aspects perceived as more accessible to students' understanding. Adopted more difficult aspects as teacher resource materials, or, in a few instances where information was seen as important and necessary for individual and/or group work, adapted through re-writing for student use. Selected 'less difficult' aspects of content as student resource material.	Selection of material which had direct relevance to the study of historical, social and economic forces shaping the industry. Rejection of other (particularly anthropological) material.	

Table 6.2: Application of 'match/mismatch' matrix to Case A (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	List of objectives relating to an understanding of the characteristics of diets of different cultures and the influence of economic, emotional, cultural and symbolic considerations on diet.	Self-study material for home-based learning: involves reading, learning activities (usually written), self-assessment.	Flexible, but 10+ hours suggested.	Not applicable.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	The ability to analyse controversial ethical problems with reference to the role of the (catering) industry (e.g., alcoholism, diet and health, food and energy shortage).	Features not pre-specified. However, when decision was taken to depart from original specification for format/type of materials and to produce instead teacher resource and student resource materials, a further decision was taken to offer (i) lectures, (ii) group work based on discussion sheets, (iii) private study guided by worksheets.	2 hours per week over a 3-week period with additional time for individual private study.	Not specified.
THEORETICALLY DESIRABLE ACTIONS/CHANGES C	Focus attention on subject matter linked to those objectives which make reference to, or are to be associated with food habits and factors affecting diet. Incorporation of selected information in the worksheets and discussion exercises so that issues of controversy and ethics are positively and deliberately raised.	'Matching' of items of content/information with appropriate teaching approach/ learning experience.	Compensate for loss of study time by making appropriate cuts in the length and/or detail of the material.	Not applicable.
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D	Supplemented worksheet text with additional information and questions to provoke controversy and raise ethical issues relating to individual decision-making with respect to diet and nutrition. This additional text was developed ab initio . Re-worded some of the OU text's self-assessed questions for incorporation into the discussion exercises for same purpose.	Adopted "more difficult" (sic) aspects of subject matter for didactic classroom-based lecture. Used "less difficult" (sic) aspects for student private study, guided by worksheets featuring adapted material. Adaptation involved re-writing so as to (i) introduce controversy and ethical considerations (ii) reduce sentence length (iii) "remove technical and jargon words" (sic). Adapted self-assessed questions for incorporation into discussion sheets for group work.	No recognition given to this feature.	Not applicable.

teaching/learning materials was changed in favour of producing teacher resource and student resource materials instead (B1). The decision about the organization and sequencing of content was not considered at any point of the development activity, despite the fact that the sequencing of self-study material is highly important to the intellectual integrity of the materials (B4 and C4).

The choice of lectures, group discussions and private study as instructional strategies occurred during the adoption/adaptation process per se (B6) and appeared to be causally linked to the decision to produce teacher resource and student resource materials. The teacher resource material provided information for the teacher which could be transmitted easily and effectively to students through the lecture method. The decision to devise student resource material consisting of worksheets and discussion sheets clearly shaped the decision to use individual private study and group work.

The decision to produce resource materials rather than learning materials was taken after it became clear to the tutor that the adaptation task involved would be onerous and demanding. In order to avoid undertaking such a task, she changed the original specification and divided the material into "more difficult" and "less difficult" categories. The designation of the "more difficult" as teacher resource material obviated the need for the substantial modification which would have been required had the material been for student consumption (as A2 and B2 indicate, there was a high degree of 'mismatch' in relation to the target population). Moreover, adaptation was avoided by 'augmenting' the text of the work- and discussion sheets to re-orient the materials so that they could take up issues of controversy and ethics.

Despite the strategies that were employed to effectively side-step adaptation procedures, some modification of the 'existing' materials was undertaken as a deliberate choice. This was in situations where, for educational reasons, it was seen as important that students acquired particular items of information or had particular learning experiences in individual or group settings. Adjustments to the materials through re-writing were aimed at reducing the complexity of the conceptual content and its presentation (D2, D5 and D6) and it seems likely that these adaptation procedures also served to accommodate the consequences of 'fragmenting' the highly structured OU text, with its many forward and back references, and its strict ordering of information items and associated learning activities (C4). However, as 'mismatch' with respect to sequencing was not identified by the tutor, it was obviously not an issue which was overtly addressed in the adaptation process. Thus any modification which accommodated this area of 'mismatch' was the result of a 'happy accident'.

6. Summary

A number of key features of the 'new' requirement was not worked out before engaging on the adoption/adaptation process and the appraisal of the Open University unit involved only a cursory examination based on one feature (viz., broad study content). The feasibility of modifying the material was not given prior consideration and it was only after the start of the adoption/adaptation work that the size of the task became apparent to the tutor. The solution she adopted was to change the 'original' specification which defined not only the format of the 'new' materials but also the teaching approaches/types of learning experience.

Further 'mismatch' between the now-changed specification for the 'new' materials and the Open University unit was accommodated by a mixture of adoption, adaptation and 'augmentation' strategies. Although there was some consideration of the educational consequences of using one strategy or another, the main intention was to minimize the amount of modification carried out to the materials. No appreciation was registered of the special difficulties involved in adapting highly structured materials for a different use in a different educational context, and it appeared that the 'mismatch' arising from this was remedied by 'default'.

Case B

1. Background information

An interdepartmental team had been set up by senior management at this college to teach Social and Life Skills (SLS) in a range of Basic Education and Vocational Preparation programmes. The tutor involved in this particular adoption/adaptation attempt was new to the college and to FE teaching. His task was to interpret and operationalize a broad college-devised policy statement concerning the SLS teaching of handicapped students (mentally and/or physically and/or emotionally disturbed). This policy statement specified broad educational intentions and broad content areas. The college had not previously catered on any large scale for a student target group with these characteristics in the SLS area. This case has been chosen for analysis here because it illustrates the importance of assessing the feasibility of carrying out adaptation activities in the light of the characteristics of the 'new' requirement and the institutional conditions which prevail.

2. Decision to adopt/adapt

Ab initio development was being considered by the tutor. However, he had only limited experience of curriculum development work and asked the author of this study for help in generating materials for the 'new' courses/programmes. It was suggested to him that he considered the possibility of adapting 'existing' materials. This he decided to do.

3. Factors influencing the choice of 'existing' materials

The tutor conducted a limited search for 'existing' materials in the college library but did not find anything which he considered suitable in terms of broad content area. The author suggested some materials from 'Exploration Man' which treated the topic of stigma and prejudice and made these materials available to the tutor for scrutiny. Having no other 'existing' materials at his disposal, the tutor decided to adapt units from 'Exploration Man'. Thus the search for 'existing' materials was not widened and the 'Exploration Man' materials were 'chosen' by 'default'.

4. The appropriateness of 'existing' materials

In choosing the units from 'Exploration Man', no account was taken of the high degree of precision provided by the 'original' curriculum developer in relation to the different features (curricular and contextual) and the high degree of structuring built into the design of these materials. No consideration was given to the substantial differences in the characteristics of the 'new' target population compared with that for which 'Exploration Man' was designed, or to the teaching approach(es)/type(s) of learning experience (these were not

pre-specified) or to the difference in teaching time requirement. Appropriateness was judged solely in terms of the broad comparability of content/subject matter after a cursory examination of the 'Exploration Man' units. Thus a significant number of features 'flagged' extensive degrees of 'mismatch' but these were not picked up by the tutor. Consequently no consideration was given to the feasibility of undertaking the adaptation task.

5. Adaptation decisions and strategies

It is noted from the grid information accompanying this case (see pages 166-167) that the tutor approached the curriculum development task with the characteristics of the student target population in mind (B2) and with the idea that the teaching/learning would address the issue of stigma and prejudice, with reference to race (B3) over a period of 10-15 hours (B7). However, no consideration was given to a number of important features viz., the type of material to be produced (B1), the organisation and sequencing of content (B4), the learning outcomes (B5) and the teaching approach(es)/types(s) of learning experience (B6). Decisions concerning these features were taken after the start of the adaptation activity (B1, B6) and were influenced by the extent of 'mismatch' perceived with respect to the target population and by the strategies developed to overcome this 'mismatch'.

The grid indicates that the decision to select appropriate information items and learning activities from 'Exploration Man' for incorporation into worksheets and reading exercises was a response to the perceived scale of the 'mismatch' (B1) and was obviously viewed by the tutor as a strategy for reducing the modification task. However, whilst the informed selection, based on criteria of relevance, from a set of

Table 6.3: Application of 'match/mismatch' matrix to Case B

	NAME and TYPE of MATERIAL 1.	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2.	SUBJECT/STUDY AREA and its CONTENT 3.	ORGANIZATION and SEQUENCING of CONTENT 4.
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	Teaching/learning material. Two (trial) units of 'Exploration Man' from Schools Council Integrated Studies Project (used in Years 4/5 in secondary schools)	14-16 years, across the ability range.	General/Integrated Studies: topic on stigma and prejudice, with particular reference to Jews and gypsies. Integrated content involving synthesis of Social Anthropology, Sociology, Psychology, English Literature.	Content presented as topics within which particular issues/problems are explored. Recommended sequence within each topic.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	Not specified. Decision taken after recognition of 'mismatch' with respect to target population to develop student resource materials - reading exercises and worksheets. This was later amended during the conduct of the modification, to student resource material and teacher resource material. Both decisions taken in face of perceived complexity of adaptation task.	16+, low ability, some ESN(M) handicapped; significant proportion of non-white students. Some also physically handicapped and/or emotionally disturbed.	Social and Life Skills: topic on stigma and prejudice, with particular reference to race. No further specific considerations.	No consideration given to these issues.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Select appropriate information items and learning activities. Re-write and possibly 'augment' material.	Substantial simplification.	Some consideration to the precise nature of the study content.	Be attentive to any possible implications of loss of recommended sequence within topic when preparing worksheets.
ACTUAL ACTIONS/ CHANGES RECOGNIZED AS NECESSARY D.	Selected information items and learning activities for incorporation into worksheets. Adopted 'more difficult' components as teacher resource material to inform self further on topic at later stage.	Substantial 'mismatch' recognized. Adapted material seen to place lower cognitive demands on students by re-writing in simpler language and changing some exemplification of make more relevant to non-white students. Developed some short components ab initio to supplement and increase relevance of study content.		Some re-writing and additional writing.

Table 6.3: Application of 'match/mismatch' matrix to Case B (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	List of objectives relating to the development of understanding of processes involved in 'labelling', 'scapegoating' and 'stigmatization'.	Classroom discussions, reading, written exercises, role-play, drama, simulation exercises, project work, film.	20+ hours	Film projector
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Not specified.	Not specified though tutor favoured individual, student-centred approaches. Decision taken at a later stage, in conjunction with the decision about the type of materials to be produced (see B1) to organize tutor-student discussions based on reading exercises (in one-to-one contexts) and individual student work using worksheets. Somewhat later, the idea of also using some didactic classroom teaching was added.	10-15 hours: organization flexible.	None (film not used)
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C	-		Reduce teaching/learning time.	
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D		Adapted selected material for incorporation into worksheets and reading exercises. Extensive re-writing to simplify vocabulary and sentence structure.	Not considered. Reduction in length occurred as result of adaptation of materials to accommodate 'mismatch' perceived in relation to D1, D2, D4 and D6.	

materials may effectively reduce the need to modify, the tutor decided, during the course of this activity, that he had underestimated the size of the adaptation task and that the content items, once selected, would need to undergo substantial modification before they could be incorporated into the proposed reading sheets and worksheets. He therefore developed additional strategies designed to reduce further the scale of the adaptation activity.

This involved the differentiation of the 'Exploration Man' material in terms of the cognitive demands it placed on students. Material perceived as 'less difficult' was adapted for student use by re-writing, using shorter sentences and simpler grammatical structures, and by some 'augmentation'. The 'more difficult' material was, however, not adapted for student use but instead became defined as 'teacher resource material' by the tutor's decision to use it directly i.e., to adopt it, as a source of information for himself (D1, D2).

Whilst the designation of 'more difficult' material as teacher resource material effectively avoided the substantial adaptation task which would have been necessary to render the material suitable for student use, the decision had implications for the teaching approach. This was because the content items contained in the now-teacher resource material required mediation by the teacher at classroom level in order to be acquired and learned by the students. The tutor decided that the presentation of this material called for some didactic classroom teaching, even though he considered that this approach was not well suited to the characteristics and needs of this target population (B6).

6. Summary

This case points to the implications of choosing a particular set of materials for use in a 'new' context when insufficient attention is devoted, at the scrutiny stage, to differences between the 'existing' materials and those required for the 'new' course/programme. The tutor committed himself to using the 'Exploration Man' materials because he perceived no alternative, and it was only at a later stage, when he addressed himself to the adaptation task itself, that the full impact of the 'mismatch' relating to the student target population, and the necessary scale of the modification exercise, became apparent to him. In an attempt to minimise the adaptation task, many decisions relating to 'key' features of the 'new' materials were taken by 'default'. The nature of these 'new' materials was shaped not by choices built into any specification of what was required, but as a result of trying to overcome 'mismatch' problems with an economy of effort. In this way, decisions such as those relating to the type of material to be generated, the learning outcomes and the teaching approach(es)/type(s) of learning experience were causally connected to the extensive 'mismatch' observed in relation to the target population.

Had decisions relating to these 'key' aspects of the 'new' materials been made before the conduct of the scrutiny and had the scrutiny been organized on the basis of a careful 'matching' of all features with those of the 'Exploration Man' materials, the nature of the 'mismatch' and the actions necessary to its removal could have been noted at an early stage. It would then have been possible to decide just how manageable and feasible the adaptation exercise would be, and to consider alternative 'routes' (e.g., a more extended search for suitable materials for adoption/adaptation or ab initio development, perhaps involving

collaborative work with a colleague in view of the tutor's lack of experience in curriculum development.

Case C

1. Background information

The college, a large one in the inner-city area of London, had been asked by the MSC to offer a range of courses in Basic Education for a target group hitherto not catered for by the college, viz., those with no, or only low-level leaving qualifications, who were unemployed and vocationally uncommitted and whose mother-tongue was not English. The need to respond to the educational requirements of this 'new' student population was initially articulated at LEA level and had resulted in the establishment of a curriculum development project responsible for producing resource materials for such students. These materials had been made available to all colleges in the ILEA area.

The case is of interest because it demonstrates the influence of this large regional project (which produced purpose-built resource materials for courses such as the ones being developed at this college) on adoption/adaptation decision-making at institutional level.

2. The decision to adopt/adapt

The response to the 'new' requirement was staged against the context of the work of the ILEA FE Curriculum Project which was producing an abundance of material for student target populations with characteristics outlined above. Moreover, the tutor involved in the 'new' development

had previously taught English in secondary schools and was knowledgeable about a variety of text-books and curriculum/resource materials aimed at the school sector. She was not, in general, favourably disposed to adaptation work, arguing that it was 'time-consuming' and that, because of the quantity of readily available curriculum/resource materials, she was looking primarily for material which could be used directly or which required only minimal adaptation. For the same reasons, she did not consider ab initio development to be a very attractive proposition either. Thus an a priori commitment was made to use adoption wherever possible, as a strategy for curriculum development.

3. Factors influencing the choice of 'existing' materials

The tutor visited the resoure bank set up by the FE Curriculum Project and carefully scrutinized the range of resource materials available for Basic Education. She also searched the library at her college. As a result of an extensive search, she chose a range of materials which she considered to be suitable in terms of the following criteria (i) the linguistic and cultural characteristics of the student target population; (ii) the study areas/topics which were to be covered;(iii) the desired learning outcomes and the nature of the 'new' educational context (one-to-one teaching/learning situations). Thus, in choosing from the pool of materials available, the tutor was involved in 'matching' key features of the 'new' specification with the nature of 'existing' materials.

4. The appropriateness of 'existing' materials

After meeting the student target group, discussing with them on an individual basis their learning needs and negotiating with them the

details of their learning in future sessions (within the framework of the chosen topics and intended learning outcomes), the tutor conducted a further, more extensive scrutiny of the chosen materials. This time, on the basis of notes she had taken during the interview with each student, she checked for 'mismatch' between the demands of the selected material and the ability (in terms of comprehension and reading levels) of the student. During this second, more detailed scrutiny therefore, the 'matching' process was focused on individual needs within the student target population and, in so doing, the tutor was able to identify, with great precision, the loci of 'mismatch'.

5. Adaptation decisions and strategies

The grid (see pages 173-174) indicates that although the same set of materials was chosen for all students (A1), modifications were carried out where necessary, i.e., when the material was seen as 'too demanding' (in terms of comprehension and reading levels) for an individual student (D2). In this way, students had the satisfaction of following a common programme but one which was finely tuned to individual abilities. Modifications to the selected materials were made by re-writing texts to make them more easily understood by students whose command of English was poor (D2, D5).

Adaptation procedures were also carried out to accommodate the individualized nature of the learning context, viz., the student working on his/her own or in a one-to-one setting with the tutor. Activities requiring the co-operation of other students, e.g., role-playing and group discussion, were deleted, although in some cases discussion topics were retained for tutor-student interactions (D6).

Table 6.4: Application of 'match/mismatch' matrix to Case C

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	(i) Student resource material from ILEA FE Curriculum Development Project: 'Accident', 'Spot of Bother', 'Living in a City', 'Working in a City', 'Learning in a City'. (ii) Learning material from 'English: Your Need' (course published by Wheaton for secondary schools. (iii) Teaching/learning material from 'Its Your Life: a Personal and Social Course' (funded by MSC).	ILEA and MSC-funded materials produced for 16-19 year olds, low ability, vocationally uncommitted. Wheaton materials produced for 14-16 year olds, low ability.	Humanities/Social Studies: integrated content involving English, Geography, History and Social Studies.	Content organized on basis of topics and themes. Sequencing: flexible.
CHARACTERISTICS and CONDITIONS OF 'NEW' REQUIREMENT B.	Student resource material: reading exercises and worksheets for individual work (alone or in a one-to-one context with tutor).	16+, low ability (CSE grade 4 or below), vocationally uncommitted. Students whose mother tongue is not English.	Social and Life Skills: integrated content involving literacy and social studies. Specific topics: letter-writing, applying for a job; making friends; family life; using English in everyday life.	
THEORETICALLY DESIRABLE ACTIONS/ CAHNGES C.	Select, from available pool of resources, reading exercises and worksheets which may be used directly (adopted). Give consideration to use of components of learning and teaching/learning materials and the incorporation of information items, learning activities, etc., into the desired reading exercises and worksheets.	Make necessary adjustments to vocabulary and sentence structure of text.	Check relevance of topics and themes for relevance to intensive ESL work.	
ACTION ACTIONS/ CHANGES RECOGNIZED AS NECESSARY D.	No overt recognition accorded to differences in the nature and form of the three sets of materials.	Some re-writing in terms of individual student needs. For those with comprehension and reading difficulties, some sentences were re-written to simplify their structure and some words were replaced or explained in the text.	Content selected and rejected from totality of topics and themes on offer in terms of relevance.	

Table 6.4: Application of 'match/mismatch' matrix to Case C (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Various goals and objectives relating to competences in written and spoken communication in personal relationships and living in contemporary British (urban) society.	Mixture of reading exercises and worksheets for individual study; discussion topics for group work; role-playing exercises; case-study material for group work.	Flexible or variable.	
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Listing of goals and objectives relating to competences in written and spoken communication, job hunting and job applications, personal and social skills, etc.	Individual (guided work); discussion on one-to-one basis with tutor.	Flexible, determined according to perception of student need and interest.	
THEORETICALLY DESIRABLE ACTIONS/CHANGES C	Reject study content which is not directly linked to goals and objectives relating to communication, jobs and relationships.	Review anticipated learning outcomes of various group work activities and decide whether to seek alternative ways of developing these competences through individual work by or with students.		
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D	Content appraised in terms of criteria of relevance to characteristics of student target population and intended learning outcomes.	Focused attention on reading exercises and worksheets. Discarded role-playing exercises and case-study material. Used some of the discussion topics for individual one-to-one work with students.		

6. Summary

It is noted that some of the important decision-making issues normally associated with adoption/adaptation do not present themselves in this case-study. This is because this adoption/adaptation exercise was conducted against the background of a large regional curriculum development project, the task of which was to assess the curriculum needs of student target populations such as the one described in this case and to design appropriate resource materials which could be used in programmes to meet these needs. Thus, broad consideration had already been given to intended learning outcomes, relevant study content and the creation of appropriate conditions for student-centred learning, and to ways in which such considerations could be reflected in the design of 'new' materials. In this sense, many 'key' decisions which typically form part of an adoption/adaptation exercise had already been taken outside the college and outside the parameters of this particular case.

The adoption/adaptation work undertaken in the college therefore represents a second phase of this large-scale operation at regional level. It demonstrates how decision-making in relation to the scrutiny, 'matching' and modification of chosen materials may be undertaken at institutional level in a careful and systematic way to achieve an even finer degree of tuning with the needs of individual students on a particular programme in a particular college.

Finally, it may be suggested that the tutor's negative attitude towards adaptation (and indeed *ab initio* development too) and her *a priori* commitment to adoption is more convincingly explained by reference to the abundance and availability of purpose-built materials, rather than

by reference to an objective appraisal of the strengths and weaknesses of adaptation as a strategy for curriculum development.

Case D

1. Background information

The Community Education (CE) Section of the Open University (OU) initiated contact with a national body with responsibility for research and staff/curriculum development in Further Education, suggesting that curriculum and resource materials produced by CE (and undergraduate sections of the University) could be used directly or, after modification, to meet educational and curricular needs arising in FE. These 'needs', however, were not initially defined: the underlying premise seemed to be that whatever the nature of the need (yet to be identified), there would inevitably be suitable material within the very wide range of 'packages' developed over the years by the OU, which could, in some way, be used.

This approach from CE was made at a time when the notion of 'curriculum negotiation' was a fashionable one in FE circles. Despite the confusion which surrounded the precise meaning of the term, it was nevertheless encountered frequently in the rhetoric of the Manpower Services Commission's documentation, and in relation to the development of programmes/courses in the (then) 'new' area of Vocational Preparation. Notwithstanding definitional problems, there was agreement that, under the 'umbrella' of Vocational Preparation, a student should be involved in the identification of a programme's/course's content, that the student under the tutor's

guidance, would identify skills and knowledge items which he/she needed to acquire/develop, and that the course content would, in this sense, be 'negotiated'.

After discussion between the OU and the national FE body, it was decided to establish a project which had two broad purposes, viz.,

(i) to investigate the process of re-using 'existing' OU materials by identifying material which might be relevant either in its current or adapted form, to further education staff development needs in the curriculum area of negotiation;

(ii) to produce a 'package' of suitable materials which could be released for general use.

It is noted, therefore, that the undertaking by CE to make readily available its many courses, teaching 'packages' and resource 'packs' was 'matched' to a possible need for teachers in FE to be better informed about the nature and process of 'curriculum negotiation'. In so doing, a 'marriage of convenience' was brought about between these two phenomena and a 'new' requirement was, in this sense contrived, rather than being a genuine need. Thus, this case does not portray decisions/actions which arose from the identification of a 'new' need in the conventional way, but rather a requirement, imposed by an institution with an interest in promoting its own products, to investigate the possible re-use of such materials in a different educational context. The 'need' to which this investigation was coupled played a clearly subordinate and inconsequential role in this particular exercise.

2. The decision to adopt/adapt

The 'decision' arose from the a priori commitment, imposed on the curriculum developer, to use OU materials to meet a need which, at the start of the exercise, had yet to be established. Given the circumstances of vested interest and the absence of any genuine, clearly identified 'need', ab initio development could not be a consideration.

3. Factors influencing the choice of 'existing' materials

The obligation to use OU materials (and predominantly those produced by the CE Section) was part of the pre-conditions of the adoption/adaptation attempt. Whilst, under the terms of this commitment, there was an apparence of choice within this range, the reality was that a quite considerable number of sets/'packages' of material proved (for various complicated managerial and logistic reasons) to be inaccessible or difficult to obtain. This effectively imposed a further set of constraints on the 'pool' of material which could be appraised. Thus 'choice' was defined not in terms of the extent of any search for 'existing' materials but in terms of those materials to which the curriculum developer was allowed access.

4. The appropriateness of 'existing' materials

Against the context of an enforced union between available OU materials and the identification of materials for FE staff development in curriculum negotiation, the curriculum developer recognized that criteria for appraising the appropriateness of 'existing' material needed to be established. She was however conscious of the wide-spread uncertainty

about the precise meaning, in operational terms, of 'curriculum negotiation' and recognized that any criteria of 'appropriateness' which she might develop for the selection of materials could, and probably would, be a subject of criticism. Moreover, the composition and characteristics of the FE group which was to be the target of the adoption/adaptation attempt, were unclear. To complicate the issue further, no precise educational intentions underlying the development had been established.

To solve these problems, the curriculum developer decided to adopt a definition of curiculum negotiation suggested by a colleague, viz.,

> ..."Identifying the skills and experience of the student, exploring the range of opportunities that are available and seeking, through discussion (involving all the participants) to achieve a 'best fit', having due regard to the inevitable constraints that will be met". (Miller, 1982)

The processes which were identified in this definition were then operationalized by the curriculum developer in terms of competences which she considered could be grouped under headings such as "communication skills", "social skills", "management skills", etc. On this basis, material was selected in terms of the perceived appropriateness of its broad subject/study content to the development of such skills.

An initial scrutiny was conducted in which all and any material which appeared in some way to be related to, or imply the development of these skills, was set aside for further consideration. A second scrutiny was then carried out in which a conscious effort was made to clarify intentions about (i) the form/format of the 'new' materials; (ii) the learning outcomes to be achieved; (iii) the details of the target population and (iv) the nature of the study content.

Making decisions about the features of the materials to be developed in tandem with the scrutiny of OU materials inevitably resulted in such decision-making being overly influenced by the nature of the 'existing' OU materials. The curriculum developer decided, for instance, that the mode of presenting the materials would 'mirror' that conventionally demonstrated in many OU materials, viz., a modular, activity-based, self-assessed mode. Moreover, the target group for the 'new' materials was defined as 'heterogeneous', consisting of FE staff who would necessarily differ in terms of backgrounds, extra-teaching duties, prior experience, intellectual abilities, knowledge and understanding of Vocational Preparation students, etc. This has to be compared with the similarly heterogeneous target for CE materials, which cater for wide varieties in prior knowledge, ability and interests. Finally, the problem of specifying the learning outcomes with any precision proved to be too difficult because of the wide differences in the target population. These were therefore merely stated in terms of broad skills to be acquired.

5. Adaptation decisions and strategies

The adaptation 'decisions' and associated strategies indicated in the grid (see pages 181-182) must be seen as mechanisms for coping with the difficulties of the curriculum development task as it presented itself, rather than as adaptation decisions and strategies as defined in this study. Whilst a common format of modules/units of information, based on topics such as 'communication', 'management', etc., was imposed on the OU materials (A1), and features characteristic of distance education materials were removed (A4), it was recognized that it would be

Table 6.5: Application of 'match/mismatch' matrix to Case D

	NAME and TYPE of MATERIALS 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	Range of learning and resource materials from the Open University for distance teaching: 'Parents and Teenagers' (P914), 'Teaching Styles for Continuing Education' (P520), 'The Training of Adult Educators' (P510), 'Education for Family Life' (P523), 'The Handicapped Person in the Community' (P251), 'The Effective Manager' (P670), 'Purpose and Planning in the Curriculum' (E204), 'Contemporary Issues in Education' (E200), 'Introduction to Psychology' (D526Z), 'Managing in Organizations' (T243), 'Education for Adults' (E355), 'Management in Post-Compulsory Education' (E324).	Adults, some at undergraduate level, others non-specialist. High/medium ability.	Psychology, Sociology, Management Studies, Social and Personal Studies, Education. Some content subject-based; other content integrated through use of themes, topics, issues or problems.	Learning materials: highly structured, specified sequencing of study content. Resource materials: flexible use, loosely structured, sequence recommended.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	Not specified initially. Later decided to produce teacher development material for in-college work. Later still, decision made to produce modules/unit of content and a self-appraisal questionnaire to help students identify which modules were relevant to their needs and therefore needed to be studied.	Not specified initially. Later decided to aim at FE staff involved in curriculum negotiation in the context of Vocational Preparation programmes. At later stage still, target group further defined as FE administrators (e.g., Vice-Principals) and tutors (directly involved in negotiating and participating in Vocational Preparation programmes).	Curriculum negotiation. However lack of clarity over definition and thus lack of clarity about detail of study content. Later, definition of curriculum negotiation loosely defined and content identified and organized in terms of themes, topics, issues or problems.	Materials organized by units/modules. Study sequence of 'pack' of materials left flexible.
THEORETICALLY DESIRABLE ACTIONS/CHANGES C.	Selection of relevant material from totality. Common format/approach and a degree of structure to be imposed on resource material. Deletion of in-text activities, references to additional reading, self-assessed questions, etc.	Accommodate differences in orientation, interests and specialisms between target groups and within target group for 'new' materials.	Identify more clearly nature and defining characteristics of 'curriculum negotiation'.	Retain prescribed sequencing of study content in learning materials or make necessary adjustment if sequencing is 'disturbed'.
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D.	Material re-written and re-structured to achieve modules/units of roughly same length and exhibiting a common format/approach to its presentation. Deletion of features of distance learning (viz., in-text activities, study guide information, etc.).	Achieved through selection of certain materials from totality available. Materials relying on extensive specialized knowledge rejected. Re-writing of text in places to make it more relevant to a FE target group; addition of FE-related exemplification and contextualization.	Recognized importance of defining study area but did not attempt definition with any degree of precision. Sought to make definition itself and area for 'negotiation' at later stage.	Sought to retain 'original' sequencing within separate units/modules as far as possible.

Table 6.5: Application of 'match/mismatch' matrix to Case D (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	Wide range of learning outcomes too numerous to specify.	Learning materials: home-based independent study. Resource materials: group work facilitated by leader/tutor, discussion and learning activities.	Flexible (determined by the student).	Not applicable.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	Not identified initially. Later stated as follows: (i) enhanced understanding of why negotiation is desirable; (ii) development of skills involved in actual process of negotiation; (iii) greater understanding of the constraints to be overcome in relation to the (a) institution (b) personality/ situation of the other person (c) personality/situation of self.	Not identified initially. Later decided to produce units/modules of material. Co-ordinated by theme of 'curriculum negotiation', for self-study and/or group discussion work, facilitated by a mediator.	Flexible (determined by the student).	Not applicable.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Need for more detailed specification of learning outcomes and appropriate selection of study content.	Need for more precision about teaching approach(es)/type(s) of learning experience.		
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D.	More detailed specification recognized as desirable but no action taken because of uncertainty on part of curriculum developer about precise nature of desired learning outcomes. Outcomes merely articulated in terms of broad skills to be developed.	More detailed specification recognized as desirable but no action taken because of differences (with respect to prior knowledge, time available for study, commitments, responsibilities, etc.) between members of target population.		

impossible to generate materials which (i) had clearly defined learning outcomes;(ii) had a widely-acceptable study content;(iii) were finely-tuned to the needs of such a 'mixed' target group (B5, B3 and B2). Thus, further modifications were not carried out to the chosen materials.

In order to rationalise the decision not to proceed further with the adaptive exercise, the tutor argued that

(i) learning outcomes could be articulated by tutors after they had been exposed to the chosen information items and could form a basis for exchange and discussion with other tutors:

(ii) the tutor using the materials could, with the aid of a self asessment schedule (which was developed to accompany the units/modules of the the staff development 'pack'), assess his/her own learning needs and make further appropriate selections from the material.

6. Summary

This case cannot be regarded as illustrative of adaptation in the sense in which it is defined in this study, viz., where actions were taken to modify 'existing' materials in response to a clearly identifiable curricular need. On the contrary, this curriculum development, although defined as an adaptation attempt by the OU, the FE body, and the curriculum developer herself, demonstrates the reverse of the 'classical' model because it concerns a situation in which a curriculum 'package', coupled to a contrived need, sought a 'consumer'. This distinction is important because the lack of success of the development arguably arises not as a consequence of necessarily incorrect or inappropriate actions on the part of the curriculum developer, but because the constraints arising

from this artificially created situation proved overwhelming.

All 'decisions' and related actions which featured in this particular exercise arose from attempts to confront and negotiate these difficulties. The obligation to generate a 'product' of some kind forced decisions to be taken about certain features of the 'new' requirement. However, continuing uncertainty about the precise nature of the materials, the target group and the purposes to which the materials were to be put resulted in the adoption of a 'compromise' position in which such features could only be broadly defined. The outcome was a set of materials which required further 'fine tuning' at the implementation level and placed the curriculum developer under an obligation, as she perceived, to justify this 'decision'. The post hoc rationalization which she offered served to mask the problematic assumptions which underlay this particular project.

Case E

1. Background information

This adoption/adaptation attempt took place in a large College of Arts and Technology and involved the Head of the Department of Science and Humanities working collaboratively with a member of staff from the Mathematics and Computing Department.

The task facing the curriculum developers was to design a MSC-sponsored course entitled "Software and Technical Documentation" which would instruct students in the art of writing technical literature, in documentating software and in communicating with a lay readership

about technical products. At the time the research was conducted, the course was unique and was recruiting on a nation-wide basis. It was seen as important by college staff and the MSC because it served to remedy the shortage of people who could write technical literature and counteract an existing trend of drawing engineers and scientists into the writing of such literature when, arguably, they could be used more effectively by deploying their skills in the areas for which they had been trained. The locating of this course at this particular college was seen as logical as there were a number of software houses and high technology companies in the area.

The course was mainly devoted to computing, systems analysis and microprocessors, although approximately a quarter of the total time was spent on technical communication and a quarter on the impact of science and technology on society. It is in this latter area that the adoption/adaptation work reported here took place.

The tutor involved in the development (the Head of the Department of Science and Technology) had extensive knowledge of a wide range of curriculum/resource materials, particularly those emanating from secondary school curriculum projects, having worked in schools prior to teaching in FE. He had had substantial previous involvement in college-initiated curriculum development and, as Head of Department, was in the strong position of being able to arrange appropriate conditions for his own development work.

The work reported here, however, may not be seen as constituting an adaptation exercise in the full sense. This is because resource materials were used to meet the 'new' requirement and these, characteristically, leave unspecified a number of features which, by

definition, cannot be affected by the adaptation task (this issue was discussed in Chapter 3 of this study). Nevertheless, this case is seen as useful because it demonstrates the nature and source on constraints which may operate on the adaptation process.

2. The decision to adopt/adapt

No consideration was given to ab initio development because an a priori commitment was adopted at the planning stage of the new course to use the materials from the 'Science in Society' project. Thus, it was the determination to use these particular materials which necessarily defined the development task as an adoption/adaptation attempt.

3. Factors shaping the choice of 'existing' materials

No search was conducted for alternative sources of materials. The tutor had been involved in the writing of the 'Science in Society' materials and in their trials. He had detailed knowledge of the materials, had them in his possession and was anxious to use them in the 'new' course. The 'choice' was therefore not made a a result of a 'matching' of the 'new' requirement with the 'existing' materials; rather, the influence which the 'Science in Society' materials had been allowed to exert at the planning stage of the 'new' course eroded 'choice' and made the use of such materials certain and inevitable.

4. The appropriateness of 'existing' materials

The rationale offered by the tutor was in terms of (i) their subject matter;(ii) their flexibility. Their subject matter was seen as highly relevant to the attainment of the stated learning outcomes whilst their

flexibility enabled them to be used in a variety of ways and in conjunction with a range of teaching approaches. Both these factors were articulated as advantages because they served to minimise the adaptation task. Appropriateness was therefore conceived along two dimensions: congruence between the 'new' requirement and the 'existing' materials, and the ease with which the need for student material could be met.

5. Adaptation decisions and strategies

The grid (see pages 188-189) demonstrates that the tutor, in identifying the features of the 'new' requirement, gave thought to the characteristics of the target population and the learning outcomes to be achieved and that he selected items of content from the 'Science in Society' materials with these considerations in mind. However, in two instances viz., name/type of material for the 'new' requirement and the organization and sequencing of the 'new' content (see B1 and B4), no specification of key factors occurred because the a priori commitment to using these particular materials resulted in a tacit endorsement of their format and their principles for the organization of study content. Thus, failure to specify in advance certain 'key' features of the 'new' requirement created a situation in which such features were inevitably shaped and defined by the underlying philosophical principles of the 'existing' materials.

Whilst a strong commitment to the ethos of a particular set of 'existing' materials may result (as in this case) in some decisions occurring by 'default', it is equally evident that where resource materials are being used as the source of 'existing' materials, there are decisions relating to

Table 6.6: Application of 'match/mismatch' matrix to Case E

	NAME and TYPE of MATERIAL 1.	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2.	SUBJECT/STUDY AREA and its CONTENT 3.	ORGANIZATION and SEQUENCING of CONTENT 4.
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	Components of 'Science in Society', project funded by Association for Science Education (ASE) consisting of (i) Teachers' handbook; (ii) Student resource materials: information booklets, data collections, exercises, films.	16-20 year olds, but mainly VI Formers and FE students.	Broad area: Science and Technology. Specific area: role and implications of science and technology in modern society. Integrated content involving synthesis of aspects of science, technology and social science.	Content presented as themes within which particular issues are explored. Sequencing: not applicable.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	No consideration given to this factor. A priori commitment to "Science in Society" materials resulted in unquestioning acceptance of their format.	Adults, mixed ability, varied backgrounds and work/educational experience, vocationally-committed (intended careers in writing computer software and technical documentation).	Broad area: Science and Technology. Specific area: impact of scientific thought and technological advance on society and social processes, with particular reference to information technology. No specific consideration given to nature of contributing subjects but concern that subject matter should demonstrate scientific/technological principles and their application.	No consideration given to this factor because of strong commitment to philosophy and organizing principles of 'Science in Society' materials.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Deliberate consideration of format of materials in the light of the desired learning outcomes and the characteristics of the target population.	(i) Render materials more student-centred (e.g. provision of educational contexts for individual work involving varying degree of guidance from tutor) to cater for heterogeneous target population. (ii) Increase vocational relevance of materials and reduce orientation towards general education studies.	(i) Make selections from the totality of the 'Science in Society' materials which are relevant to particular interests and orientations of future technical writers. (ii) Make selections which illustrate scientific/technological principles and their application.	Consideration of whether subject matter based on themes is most appropriate organizing mode for an examination of scientific/ technologycal principles and their application.
ACTUAL ACTIONS/ CHANGES RECOGNIZED AS NECESSARY D.		(i) Increased student-centredness achieved by selection of particular teaching approaches/types of learning activities (see 6D). (ii) Re-orientation of material achieved by supplementing with (a) materials adopted from other sources; (b) material developed ab initio by tutor.	Selections made as follows: (i) 'Facts' units from student reader relating to methodology of science and technology. (ii) 'Alternatives' (Project film) for analysis of an example of technical communication. (iii) Aspects of 'Energy' unit from student reader for study of measurement and perceptions. (iv) 'Data' books relating to a range of themes for identification of time-dependent items of data. Items (i) - (iv) seen as highlighting principles and their application.	

Table 6.6: Application of 'match/mismatch' matrix to Case E (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5.	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6.	TEACHING TIME REQUIREMENT and its ORGANIZATION 7.	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8.
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	List of goals relating to development of: (i) awareness of the nature of science and technology; (ii) a questioning attitude to the opinion of 'experts'; (iii) an understanding of the role and impact of science and technology on society; (iv) an understanding of the constraints on scientists in their decision-making.	Not applicable.	Not applicable.	Not specified.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	Gain a better understanding of the role of science and technology on society so as to improve the communication skills involved in writing technical literature for computer systems and scientific/technical equipment users.	Some expository teaching (e.g., classroom lectures) but predominantly group and individual work, particularly discussions, project work, private study, visits/experiential learning.	3 hours per week over 26 weeks.	Library facilities: micro-fiche, computerized catalogue system.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Make selections of content items which have a direct relevance for an understanding of the role and impact of science and technology on society. Disregard content associated with other learning objectives.			
ACTUAL ACTIONS/ CHANGES RECOGNIZED AS NECESSARY	Content items chosen which had direct relevance for developing and understanding of the impact of science and technology on society. Other aspects of content rejected.			

'key' features of the 'new' requirement which have to be taken at an early stage of the adoption/adaptation exercise. This is because the nature of resource materials is such that no specification is given about 'key' aspects of their implementation conditions (A6, A7 and A8). Under these circumstances, decisions have to be made about features of the 'new' requirement which are not describable either as a function of the a priori commitment nor as 'default' decisions. The grid shows that the choices made relating to the teaching approaches/types of learning experience, the teaching time requirement and its organization, and resource requirements of the 'new' course, fall into this category of decision-making. The decisions about the teaching approaches/types of learning experience appear to have been influenced predominantly by a recognition of the mixed ability and varied experience of the target population, and by a concern to allow students a degree of control over the way in which they attained the desired learning outcomes. The specification of the resource requirements is a consequence of the teaching approaches/learning experiences decision.

As already noted, 'mismatch' does not, and cannot occur where features of the 'existing' materials are not specified. However, resource materials necessarily specify, albeit in broad terms, the characteristics of the target population, the subject/study area, its content and organization, and desired learning outcomes. In this particular case, 'mismatch' was perceived predominantly in terms of the characteristics of the target population (D2) but the intimate relationship between these characteristics, the nature of the learning outcomes and the subject matter, inevitably resulted in degrees of 'mismatch' along these two further dimensions (D3 and D5). The management of 'mismatch' therefore constitutes an area for analysis and comment.

The grid demonstrates that 'mismatch' was accommodated by the combined use of two strategies:

(i) the judicious selection of a number of appropriate content items from a wider range, and the rejection of the remainder;

(ii) the supplementation of the chosen items of content by additional items of material (a) adopted from other sources and (b) developed ab initio.

Thus, no attempt was made to develop and use adaptation procedures in the real sense.

6. Summary

The case demonstrates that the planning and design of a 'new' course/programme against the context of a strong commitment to use a particular set of 'existing' materials results in a failure to consider the full range of available options, and allows the characteristics of the 'existing' materials to dictate aspects of the 'new' requirement. No search was conducted for suitable alternative 'existing' materials and the issues of whether the 'Science in Society' materials were indeed appropriate for the 'new' course and how feasible it was to use them, were never raised because the assumption that they would be used was built into the design of the course. The willingness to allow the philosophy of 'Science in Society' to be imposed on, and incorporated into decisions relating to certain 'key' features of the course and its associated student materials converted a number of potentially significant 'decisions' into 'non-decisions' or decisions arrived at by 'default'.

The fact that 'Science in Society' materials are resource materials and do not specify the conditions of their implementation, nevertheless implied that a policy of 'non-decision making' could not be maintained in relation to all features of the 'new' requirement. In this respect, there was evidence of a more rigorous approach in which a careful 'matching' of the 'existing' materials and the 'new' requirement took place. The case bears witness to the close, interdependent relationships which exist among and between curricular and contextual features, and the way in which interventions to compensate 'mismatch' along one dimension inevitably have causal effects necessitating 'mismatch' adjustment activity along other dimensions.

Finally, it is noted that one of the attractions of the 'Science in Society' materials was their flexibility of use which was seen as minimizing the necessity of making substantial changes to the materials. This preoccupation with what might be termed 'curriculum avoidance', i.e., the reluctance to become involved in extensive re-writing/re-adjustment of the materials, was further evidenced by the strategies undertaken to compensate for 'mismatch'. These involved both adoption and 'augumentation' (the addition of components developed ab initio) but not adaptation as defined in this study. The tutor claimed that re-writing was less expedient and less appropriate as a means of compensating for 'mismatch'.

Case F

1. Background information

The curriculum development work featured here was undertaken by a small group of FE teacher trainers as a response to changes taking place in the teaching of science and mathematics in schools in the 1960s, and to the need to reflect these changes in the content and organization of teaching in these subject areas at FE level. Against this context, it was felt advisable to design a Foundation Course for Craft and Technician students, roughly equivalent in standard to 'O' level, involving aspects of Chemistry, Biology, Physics and Mathematics. This was intended to provide students coming into FE (who had been taught by a wide variety of methods in school) with a common base from which to pursue a range of different vocational courses.

This case was a very early attempt at the generation of materials to meet a 'new' perceived need through adoption/adaptation. Although the development took place many years before the fieldwork for the investigation was conducted, it was possible to re-construct, through talking to the members of the curriculum team and through the use of documentation produced at the time of the work, the decisions taken and procedures adopted. It is included here because it demonstrates a rational and systematic approach to adoption/adaptation by highly experienced curriculum developers.

2. The decision to adopt/adapt

No consideration was given to ab initio development. This was because the curriculum development team (i) had extensive and detailed knowledge of a wide range of curriculum resource materials emanating from school-oriented projects;(ii) wished to acquaint FE teachers with the content of some of these materials so that they had a better understanding of the school science experience of their students. For these reasons, there was an a priori commitment to adopt/adapt school-oriented science and mathematics materials.

3. Factors influencing the choice of 'existing' materials

The curriculum development group had in its possession curriculum/resource materials from a large number of British and American science and mathematics projects. It considered that a careful selection of materials appropriate to the intended learning outcomes and the characteristics of the target population could provide students with a common base of knowledge and experience which would act as a 'springboard' into a range of craft and technician courses. No search for materials was undertaken because the development team was already extremely knowledgeable about, and had immediate access to a large 'pool' of materials for scrutiny. This scrutiny was conducted after the characteristics and conditions of the 'new' requirement had been worked out in detail.

4. The appropriateness of 'existing' materials

The scrutiny of materials was careful and systematic. It focused on the extent of 'match' and 'mismatch' between the range of 'existing' materials

on offer and the sought-for features/conditions of the 'new' materials in terms of (i) learning outcomes; (ii) characteristics of student target group; (iii) subject matter; (iv) organization and sequencing of content and (v) teaching approach. Where a high degree of 'match' was noted, such materials were selected for further consideration whilst materials showing a high degree of 'mismatch' were rejected. At the end of this 'matching' exercise, the curriculum developers had more material than was required, given the duration of the course. A further selection was therefore made in terms of the attractiveness of the material, the nature and quality of the learning activities and the achievement of a 'mix' of materials from different sources. (Although this latter consideration tended to increase the size of the adaptation task, it was seen as desirable so as to avoid the possibility of drawing extensively on components of curriculum projects which some students would have already used in school.)

5. Adaptation decisions and strategies

The grid (see pages 196-197) demonstrates that thought was given to the differences in the characteristics of the pupils for whom the project materials were originally developed and those of the FE students who were to use the 'adapted' materials. Whilst the difference in age range and (to a small extent) ability was not seen as a 'mismatch' for which action needed to be taken, a re-organization of the materials was conducted which sought to increase their vocational relevance. Whilst important concepts were presented for purposes of revision, the emphasis was more on the application of scientific and mathematical principles (D2). This was achieved by re-writing some of the text and the learning activities.

Table 6.7: Application of 'match/'mismatch' matrix to Case F

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	Materials from Nuffield 'O' level schemes in Physics, Chemistry and Biology, CHEMstudy, CHEMbond, Biological Science Curriculum Study (BSCS) and Physical Science Study Committee (PSSC). Teaching/learning materials.	14-16 years, medium/high ability (secondary school)	Aspects of Biology, Mathematics, Physics and Chemistry. Content subject-based.	Content within each of the four subject areas organized on basis of topics/themes.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	College-devised Foundation course in [General] Science, roughly 'O' level equivalent. Entry qualification to range of Craft and Technician courses. Teaching/learning materials to include notes of guidance for teachers and worksheets to cover information items, learning tasks and activities, for students).	16+, medium ability, 'O' level (or near 'O' level equivalent), vocationally committed.	Units of subject-based content in Biology, Mathematics, Physics and Chemistry. Topics clearly identified by curriculum development team (but too numerous to list here).	Content within each of the four subject areas organized on basis of topics/themes.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Selection of materials in terms of stated objectives of course, characteristics of student target population, desired teaching approach(es)/type(s) of learning etc. Some linking of the chosen components.	Accommodate for differences in ability, previous experience of school-based science, orientation of students.	Select in terms of specified topics, content from relevant project materials and co-ordinate items within each of the four subject areas.	Sequence topics within each subject area to achieve progression in terms of the acquisition of concepts and processes.
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D.	Careful selection of materials from available range in terms of specification for 'new' course. The co-ordination of the chosen materials achieved by additional writing and re-writing. Notes of guidance for teachers developed ab initio.	Re-orientation of materials for general education to more vocationally relevant purposes achieved through selection of materials which re-stated key concepts and rehearsed key processes. Overall emphasis however on the application of scientific and mathematical processes. Thus some re-writing of text and of the learning activities.	Subject-based content selected from range of available project material and re-organized according to subject area.	Consideration given to hierarchies of concepts and processes within given subject area.

Table 6.7: Application of 'match/mismatch' matrix to Case F (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	Various and numerous relating to understanding and using concepts and processes in Biology, Mathematics, Physics and Chemistry.	Mixture of methods but emphasis on guided discovery and experimental work.	2 Years (full-time study)	Laboratory, technician assistance, materials for experimental work.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	In general terms: to understand and use specified concepts, principles and processes in Biology, Mathematics, Physics and Chemistry. E.g., in one of Physics units: to enhance understanding of the non-continuity of matter; to understand the concept of molecular motion of a gas and elementary ideas about kinetic theory, Brownian motion, Boyle's Law and atomic size.	Emphasis on expository teaching through lecture and demonstration. Follow-up activity mainly through worksheets.	1 year (full-time study)	Minimal laboratory work (by teacher for demonstration purposes).
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Discard learning objectives and associated subject content unrelated to stated objectives.	Decrease amount of practical/ experimental work by switch to expository teaching.	Decrease number of topics covered in each subject area and/or extent of coverage.	Reduce demands on laboratory and technician time and specialized materials.
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D.	Rejected objectives and associated subject content unrelated to stated objectives.	Presented most of information to be gained through guided discovery by teacher demonstration and/or information items in work-sheets and recommended texts.	Not given specific attention. Assumed that selections and deletions of content made in relation to 'mismatch' of other key features would result in a shortening of the course.	Demands on laboratory resources reduced to a minimum.

The other major area of 'mismatch' was in relation to the instructional procedures. The method advocated in many of the 'existing' materials was 'guided discovery' with the accent on practical, laboratory-based work. Because of limited laboratory facilities and the demands on time, material was re-written to eliminate the heavy dependence on laboratories. Findings/results from experimental work were largely presented through exposition (with some teacher demonstration) (D6).

Other areas of 'mismatch' were accorded less attention, either because it was assumed that 'mismatch' would be resolved by the changes introduced in relation to other features (as was the case with the teaching time requirement, D7) or because the 'mismatch' was 'bypassed'. 'Adaptation avoidance' was possible, e.g., in the case of the subject matter, because of the wide range of materials from which appropriate materials could be selected (D3). (The large amount of 'existing' materials tended to reduce the size and incidence of possible 'mismatch'.)

6. Summary

This adaptation attempt was conducted under conditions which were favourable to a systematic consideration of the various decision-making issues which arise in adoption/adaptation work and which promoted informed decisions about the nature and direction of necessary modifications. These conditions were (i) experience and expertise in curriculum development matters; (ii) detailed knowledge of a large number of curriculum materials; (iii) ready availability of such materials; (iv) a clear view of the 'desired' characteristics/conditions of use of the 'new' materials to be generated.

The fulfillment of these 'pre-conditions' to the adoption/adaptation attempt allowed a specification for the 'new' materials to be 'matched' against all the materials available for possible selection. Whilst this 'matching' process was conducted in terms of five 'key' curricular features, attention was given to the 'knock-on' effects on additional features concerned with conditions of use (previously referred to as 'contextual features'). Thus the case demonstrates an understanding of the interrelationships which exist between features identifiable with a set of curriculum/resource materials and the extent to which the informed curriculum developer may, given favourable 'pre-conditions', tightly control the nature, direction and impact of the adaptation process. Under such circumstances, all decisions and associated actions occur as the result of informed intention, rather than by 'default'.

Case G

1. Background information

This case features a 'sequential' adoption/adaptation exercise which extended over a period of years. The development passed through three phases, each of which resulted in the generation of materials for a different purpose and for a different target population. The 'original' materials used during the first phase of the adaptive work were chosen from a school-oriented Chemistry curriculum project; these materials were eventually used, after undergoing various modifications, as self-instructional, vocationally-oriented Chemistry 'packs' for FE students. The different phases of the development are as follows:

Phase 1: The adaptation of CHEMstudy materials for use by students on the 'H' Grade Certificate course in Chemistry.

Phase II The adaptation of the 'H' Grade Certificate course materials for use by OND/ONC Engineering (Chemistry) students for self study, (home-based) purposes.

Phase III The adoption of the OND/ONC self-study materials for use by TEC Diploma in Engineering (Levels I and II) Chemistry students, again for self-study, (home-based) purposes.

The adoption/adaptation attempts were carried out by a tutor who, at the time of the investigation of this case, was the Head of a College Chemistry Department. Phase I of the work, however, was conducted at a time when this tutor was working in a secondary school in Scotland. Whilst it is recognized that this initial phase of the work was not carried out in a FE setting, it is included here for analysis and discussion because it enables observations to be made about the 'transfer' of school-oriented materials into the FE sector. The tutor was, at the time of Phase I, already familiar with adaptive curriculum work, having been involved in previous work of this kind on a collaborative basis with a colleague. He had extensive knowledge of secondary science curriculum projects and a good theoretical grasp of the issues relating to curriculum design.

Phases II and III of the adaptive work were carried out in the FE college where, during Phase III, the tutor was appointed Head of Department. The reasons for the conduct of Phases II and III were broadly similar. The materials developed during Phase II were seen as useful revision aids or as additional re-inforcement of in-college teaching for weaker students. The impetus for Phase III was generated by concern about students who attended college on a day-release basis, once a week, for the TEC Diploma. Sometimes, because of illness or other problems, students missed that day at college and consequently

fell behind with their work. In an attempt to overcome this problem, the tutor decided to provide 'remedial' self instructional materials which covered the Chemistry syllabus and which could, in the main, be worked through by students studying alone in their homes. Thus, these study 'packs' were not seen as a substitute for classroom- and laboratory-based teaching, but rather as a resource which could be used by students to compensate for absences from college.

The 'sequential' nature of this extended adoption/adaptation exercise is obviously interesting in itself. Also instructive, however, is its demonstration of the way in which the tutor concerned, in moving from secondary into FE teaching, 'imported' his knowledge of school-oriented curriculum materials and his previously-acquired understanding of the principles and practice of adoption/adaptation to meet 'new' curricular needs arising in FE. Finally, and importantly, the case illustrates a good attempt at a rational, systematic approach to the generation of 'new' materials.

The discussion of this case of 'sequential' adaptive work is presented under the sub-headings used throughout this chapter, in a way that is intended to bring out the relationships between the three phases. The phases, therefore, are not presented as three separate developments but as 'links' in a 'chain' of curriculum development work. It should be noted, however, that some of the information relating to Phase I was not available because the exercise had taken place some years before the field-work for this study was conducted, and the tutor involved was not able to recall some of its details (a problem which was discussed in Chapter 4). Nevertheless, it was possible to 'reconstruct' with the tutor's assistance, sufficient information to make the inclusion of Phase I worthwhile.

2. The decision to adopt/adapt

The decision to use adaptive curriculum work for Phase I of the development (viz., CHEMstudy to 'H' Grade Certificate) was taken because the tutor involved (i) had access to curriculum project materials; (ii) was familiar with many of these materials; (iii) was positively disposed to using some of the materials because of their high quality and good reputation and (iv) had a positive attitude towards adoption/adaptation, having had previous experience with such work. The decision to adopt/adapt was therefore taken because of perceived advantages over ab initio development.

For Phases II and III of the development work, the same reasons were advanced for engaging in adaptive activity. In particular, the tutor stressed its value in terms of economy of time, and, being satisfied with the 'adapted' product used with the 'H' Grade Certificate students, felt this 'product' could, to advantage, be modified further for the 'new' target groups. Phases II and III of the development were therefore approached with an a priori commitment to adoption/adaptation as a strategy for curriculum development and the ab initio generation of materials was not considered.

3. Factors influencing the choice of 'existing' materials

The initial decision to consider using, for the most part, components of CHEMstudy (small elements of Nuffield 'O' level Chemistry were also considered and eventually used) for Phase I was taken against the context of the tutor's own detailed knowledge of these materials and a library search in which curriculum/resource materials from other school-oriented projects were also considered. CHEMstudy was chosen

because of a perceived overlap of its study content with topics covered by the 'H' Grade Certificate course. Thus, CHEMstudy was an informed choice, taken after an appraisal of possible alternatives on the basis of the single criterion of suitability of study content.

In Phases II and III, no further searches for alternative sources of material were carried out because a commitment to use the 'adapted' product for the 'new' purposes had already been made.

4. The appropriateness of 'existing' materials

Although the tutor could not recall the details of the desired study content and learning outcomes for the 'H' Grade Certificate course, he claimed to have conducted a 'matching' of these features with those of CHEMstudy materials, as well as a comparison of the characteristics of the student target population and the teaching approach(es)/type(s) of learning experience. From this, it would appear that a conscious attempt was made to judge the appropriateness of the CHEMstudy material by an alignment of a number of 'key' features with corresponding features of the materials intended for the 'H' Grade Certificate course. The decision that components of the CHEMstudy materials would be suitable for adaptation purposes in Phase I was therefore, it seems, based on rational considerations.

In Phases II and III, the 'matching' of features of the 'existing' materials (the 'adapted' CHEMstudy materials) with those of the 'new' requirement (first the OND/ONC course and later the TEC programme) was conducted on the basis of broad comparability of (i) the student target population; (ii) the study content. Thus for Phases II and III the check for appropriateness was less exhaustive and based on a much

narrowed range of 'key' features. This was because of the strong desire, on the part of the tutor, to re-use, if at all possible, the materials which he had previously adapted.

5. Adaptation decisions and strategies

Phase I: CHEMstudy to 'H' Grade Certificate

The grid (see pages 205-206) shows that the tutor identified degrees of 'mismatch' with respect to

(i) type of material:

(ii) characteristics of the student target population;

(iii) teaching approach(es)/type(s) of learning experience.

In order to develop worksheets and classroom-based learning activities he made selections from the CHEMstudy materials which he then re-wrote, or 'augmented' by 'new' material developed ab initio (D1). The re-writing and 'augmentation' processes took into consideration the increased cognitive demands which had to be made on the 'H' Grade Certificate students (who were older, had studied more Chemistry, and were in a rather higher ability bracket than the target population for CHEMstudy) (D2). The re-writing and 'augmentation' activities also reflected the need to re-site much of the teaching/learning activity away from the laboratory and into the classroom (D6). Thus information which students would have acquired through 'guided discovery' techniques in CHEMstudy was incorporated, in expository fashion, into the worksheets generated for the 'H' Grade Certificate students. The increased emphasis on expository teaching in the classroom was also seen as a means of compensating for any loss of structure and intellectual coherence resulting from the 'fragmentation' of highly-structured teaching/learning materials, such as CHEMstudy, into resource materials.

Table 6.8: Application of 'match/mismatch' matrix to Case G (Phase I)

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	CHEMstudy Project materials. Teaching/learning materials (for classroom/laboratory use)	16+, across ability range (secondary school pupils)	Atomic Theory; Nature of Matter; Chemical Principles; Energy Rate and Equilibrium; Characteristics of Chemical Reactions; Chemical Periodicy; Chemical Bonding in Gases, Liquids and Solids.	Content organized in terms of topics within subject area. Sequencing clearly defined within topic and non-negotiable. Hierarchical ordering of concepts and processes.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	'H' Grade Certificate course in Chemistry. Student resource (for classroom use); principally worksheets and learning activities.	17+, medium/high ability (secondary school pupils)	Not known in detail but broadly embracing some of the topics listed under 'Subject/study area' for CHEMstudy.	Content organized in terms of topics within subject area. Sequencing clearly defined within topic and non-negotiable. Hierarchical ordering of concepts and processes.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C	Remove structure imposed by curriculum developer and modify materials to render them more self-standing for a more flexible use.	Compensate for differences in age and ability by slight increase in cognitive demands placed on pupils.	Make relevant selections from CHEMstudy subject matter to satisfy requirements of 'H' Grade syllabus.	Development by tutor of course framework which acknowledges issues of structure and sequencing.
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D	Materials chosen from CHEMstudy, and co-ordinated/linked by 'augmentation' (viz., addition of ab initio developed material)	Rewrote some elements of text and some activities to make approach more 'adult' and to increase cognitive demands on pupils. Added further activities by ab initio development.	Not known.	Hierarchical ordering/sequencing imposed at implementation level.

Table 6.8: Application of 'match/mismatch' matrix to Case G (Phase I) (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Details not known.	Guided discovery; emphasis on experiential and practical learning.	2 hours 25 minutes per week.	Laboratory facilities.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Details not known	Mixture of expository teaching, practical work and discussion.	1 year. Weekly teaching/learning time not known.	Laboratory facilities.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C	Not possible to make a judgement.	Reduce amount of laboratory-based practical work and replace by classroom-based expository teaching.	Not possible to make a judgement.	
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D	Not known	Reduced amount of practical work by discarding some experiments/ activities. Introduced more didactic classroom-based teaching.	Not known.	

Table 6.9: Application of 'match/mismatch' matrix to Case G (Phase II)

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	'H' Grade Certificate course in Chemistry. Student resource (for classroom use): principally worksheets, and learning activities.	17+, medium/high ability (secondary school pupils)	Not known in detail but believed to overlap with topics required for OND/ONC Engineering course.	Content organized in terms of topics within subject area. Sequencing clearly defined within topic and non-negotiable. Hierarachical ordering of concepts and processes.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	OND/ONC Engineering (Chemistry) Student learning (for self-instruction, mainly at home).	16+, post 'O' level, medium ability, vocationally oriented (FE students).	Broad area: Chemistry. Specific areas: Energetics, Equilibrium, Acids and Bases, Chemical Calculations.	Content organized in terms of topics within subject area. Sequencing clearly defined and non-negotiable. Hierarchical ordering of concepts and principles.
THEORETICALLY DESIRABLE INTERVENTIONS/CHANGES C	Re-structured materials to make suitable for home-based use, e.g., incorporate instructions, self-assessed questions, model answers, etc. into text.	Consider vocabulary and nature of exemplification in view of different needs, background and experience of students.	Make relevant selections from 'H' Grade Certificate materials to emphasise principles and their application.	Check logic of sequencing to ensure maintenance of hierarchical ordering.
ACTUAL INTERVENTIONS RECOGNIZED as NECESSARY D	Materials adapted to make suitable for home-based study by incorporation of additional material and re-writing.	Made selections from materials and re-wrote chosen content to emphasise principles and applications. Supplemented with ab initio developed material.	Relevant selections made to emphasise principles and their application.	Sequencing checked and hierarchical ordering of principles/processes maintained.

Table 6.9: Application of 'match/mismatch' matrix to Case G (Phase II) (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES) / TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Details not known.	Mixture of expository teaching, practical work and discussion.	1 year. Weekly teaching/learning time not known.	Laboratory facilities.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Details not known.	Self-instruction (for remedial purposes) for home-based study. Small amount of in-college, practical work undertaken by students on own, using worksheets.	Flexible (determined by student).	Laboratory facilities (on occasional basis).
THEORETICALLY DESIRABLE INTERVENTIONS/CHANGES C	Not possible to make a judgement.	Reduce laboratory-based practical work to minimum and remove need for class-room discussion. Devise learning activities which can be undertaken by students studying alone at home. Provide self-assessment questions and model answers.		
ACTUAL INTERVENTIONS RECOGNIZED as NECESSARY D	Not known.	Re-oriented materials to further reduce reliance on practical work. Provided information/ideas in tutor-written text which were previously to be acquired through practical work, discussion, etc. Devised activities which could be carried out at home.		

Table 6.10: Application of 'match/mismatch' matrix to Case G (Phase III)

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	OND/ONC Engineering (Chemistry). Student learning (for self-instruction, mainly at home).	16+, post 'O' level, medium ability, vocationally oriented.	Broad area: Chemistry Specific areas: Energetics, Equilibrium, Acids and Bases, Chemical Calculations.	Content organized in terms of topics within subject area. Sequencing clearly defined and non-negotiable. Hierarchical ordering of concepts and principles.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	TEC Diploma on Engineering (Chemistry), Levels I and II. Student learning (for self-instruction, mainly at home).	16+, post 'O' level, medium/high ability, vocationally committed.	Broad area: Chemistry Specific areas: Energetics, Equilibrium, Acids and Bases, Chemical Calculations.	Content organized in terms of topics within subject area. Sequencing clearly defined within topic and non-negotiable Hierarchical ordering of concepts and principles.
THEORETICALLY DESIRABLE INTERVENTIONS/CHANGES C		Compare characteristics of student target population for possible slight differences.	Compare OND/ONC and TEC syllabus for any differences in detail. Check for redundant material/need to up-date material. In all cases, make necessary modifications.	
ACTUAL INTERVENTIONS RECOGNIZED as NECESSARY D		Cognitive demands of TEC seen as marginally greater than for OND/ONC students. Some additional, more difficult learning activities added by *ab initio* development.	Updated material by rejection of content and 'augmentation'.	

Table 6.10: Application of 'match/mismatch' matrix to Case G (Phase III) (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Details not known.	Self-instruction (for remedial purposes) for home-based study. Small amount of in-college practical work undertaken by students on own, using worksheets.	Flexible (determined by student).	Laboratory facilities (on occasional basis).
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Details not known but believed to be broadly similar to those of OND/ONC Engineering (Chemistry).	Self-instruction (for remedial purposes) for home-based study. Small amount of in-college practical work undertaken by students on own, using worksheets.	Flexible (determined by student).	Laboratory facilities (on occasional basis).
THEORETICALLY DESIRABLE INTERVENTIONS/CHANGES C	Check compatibility of OND/ONC syllabus learning outcomes with those of TEC.			
ACTUAL INTERVENTIONS RECOGNIZED as NECESSARY D	OND/ONC learning outcomes checked with those of TEC.			

Phase II 'H' Grade Certificate to OND/ONC

The grid (see pages 207-208) shows that the the main areas of 'mismatch' noted here by the tutor were the same as those identified during Phase I, viz.,

(i) type of material;

(ii) characteristics of the target population;

(iii) teaching approach(es)/type(s) of learning activities.

To cater for the re-location of learning to a home base, and to compensate for the loss of teacher mediation of the materials at implementation level, re-writing and 'augmentation' were again (as in Phase I), undertaken (D1, D6). This had the effect of re-imposing a rigorous 'framework' on the materials, one which reflected a concern for the appropriate ordering/sequencing of study content, and for the provision of information, learning activities and means of self-testing necessary to the home-based learner.

The different needs and orientation of the OND/ONC students implied a more vocational emphasis in the materials to be produced. This was achieved not through their further modification but by the careful selection of materials which exemplified principles and processes, and their application (D2). Material concerned with the teaching of concepts which, it was felt, had (or should have) already been acquired by OND/ONC students, was discarded. Shortfalls and omissions in the selected material and the co-ordination of its separate elements, were remedied by 'augmentation'.

Lastly, the modification strategies reflected an acknowledgement of the necessary loss of practical work and experiential learning implied in the re-siting of the learning to the home context (D6). Information which

might have been provided at implementation level through exposition by the tutor, or generated through group discussions in class, was provided in the text of the self-instructional units by ab initio developed material, viz., through 'augmentation'.

Phase III: OND/ONC to TEC

The grid (see pages 209-210) shows that any 'mismatch' recognized here was extremely minimal and deemed to be insignificant, and did not result in adaptation activity. The cognitive demands of TEC were acknowledged to be marginally greater than those of OND/ONC but this slight discrepancy was overcome by developing ab initio, some further, rather more difficult learning activities which were incorporated into the OND/ONC materials (D2). Thus, in 'transferring' these materials to the TEC target population, the technique used was predominantly that of adoption.

6. Summary

This case traces the 'career' of a set of materials through three phases of adaptive activity in which study content was appraised, selected, re-selected or rejected, re-organized and re-oriented, and, on occasions, supplemented by ab initio development. The versatility of adoption/adaptation as a strategy for curriculum development is reflected in the various 'transfers' exemplified in this case, viz., the 'carrying over' of materials originally designed for

(i) general education purposes at secondary school level into vocational programmes in the FE sector;

(ii) mainly laboratory-based work into (a) a mainly classroom-based setting and later (b) home-based settings;

(iii) use as teaching/learning materials into (a) student resource materials and later (b) student learning materials.

In the main, decision-making was informed by rational considerations and the adoption/adaptation activities were carried out in a systematic manner, involving a conscious attempt, on the part of the curriculum developer, to 'match' features of the 'existing' materials with those of the 'desired' materials at each successive phase of the adaptive work. The small reservation which might be attached to this statement concerns the a priori commitment (which the tutor made on completion of Phase I) to re-use, whenever possible, this 'product' of adaptation activity to meet 'new' educational needs. This had the effect of limiting the range of 'key' features which were attended to at the scrutiny/selection points in Phases II and III.

The case also illustrates the impact and 'knock-on' effects which modification to one 'key' feature of the chosen materials has for another, or other, 'key' feature(s). For instance, changes made to the nature and form of the materials had implications for the teaching approach(s)/type(s) of learning experience. The change in status of the CHEMstudy materials in Phase I from teaching/learning material (in which a high degree of specification is given concerning the use of the material) to student resource material (where flexible use in a framework decided upon by the tutor is intended), gave the tutor the opportunity to choose alternatives to the discovery-based, experiential emphasis of CHEMstudy, and to introduce more expository, classroom-based teaching. However, in Phase II, these student resource materials became (student) learning materials for students studying, for the most part, alone at home, and this necessitated the re-introduction of a high degree of structure into the materials, to the extent that they did not require teacher mediation.

Similarly, it is noted that there are causal connections between the characteristics of the target population and the nature of the study content. Differences in age, ability, orientation and past experience between target populations was reflected in changes made to the study content, e.g., increasing the complexity of the presentation of information and learning activities, re-orienting the material to emphasise principles and their application, and removing redundant information and updating.

Case H

1. Background information

This adaptation attempt was conducted by a tutor in a Department of Mechanical Engineering who had, the previous year, collaborated with two colleagues in the ab initio development of student resource materials in relation to teaching the servicing of ball and roller bearings. The 'original' target group consisted of experienced working men, already highly skilled, who had returned to college to study for a college Certificate of 'Skill Enhancement' in which new technological techniques were taught, together with an appropriate theoretical input.

Adaptation of the student resource materials was carried out to render them suitable for the teaching of the same topic to young, inexperienced, first-year students studying for the CGLI (Part I) examination in Basic Engineering Craft Studies. Because the servicing of bearings is essentially a practical, activity-oriented study area, the major modifications were conducted with respect to the teaching approach(es)/type(s) of learning experience. Such modifications.

nevertheless, implied adjustments to the 'original' student resource materials that were used to supplement and reinforce laboratory- and work-group practice.

This case has been chosen for analysis because it features an adaptation attempt in which materials designed originally for a specialized target group in FE were 'transferred' for use within the same Department for a target group with very different characteristics. It is also instructive because it demonstrates the possibilities of adaptation work in a practice-based study area.

2. The decision to adopt/adapt

Ab initio development had been conducted to produce the 'original' set of student resource materials. However, when the need arose to stage a new course which offered, as one of its components, the same topic, it was considered natural and sensible to adapt the 'existing' material because of the economics of time involved. Thus ab initio development was not considered as an alternative strategy on this occasion.

3. Factors influencing the choice of 'existing' materials

The decision to use adaptation as a means of responding to the 'new' need embodied the assumption that the 'existing' materials to be modified would be those developed the previous year for a different course/target population. Therefore, a search for possible alternative sources of material was not conducted.

4. The appropriateness of 'existing' materials

Because the 'existing' materials were so familiar to the tutor (who had been involved in their development), a scrutiny was not conducted at this stage to judge their suitability for the 'new' requirement. The materials were seen as appropriate because they related to the same topic as that to be covered in the 'new' course. Whilst recognizing the substantial differences between the characteristics of the students who had followed the 'Skills Enhancement' course and those enrolled on the CGLI Basic Engineering Craft Studies course, the tutor considered that the major changes to be carried out would be at implementation level with respect to the teaching approaches because of the practical nature of the study content. On these grounds, he decided that modifications to the student resource materials (which served to support the practical work) would be entirely manageable.

5. Adaptation decisions and strategies

The grid (see pages 217-218) demonstrates substantial 'mismatch' with respect to the characteristics of the student target population (A2, B2) and consequently, to the orientation, purpose and levels of the two courses (A3, B3 and A5, B5). These differences are further reflected in the choice of the teaching approach(es)/type(s) of learning experience in relation to each course. The 'Skills Enhancement' course sought to build upon, and extend the considerable degree of skill already possessed by the students by exposing them to further experiential, student-centred learning, whereas the Basic Engineering Craft Studies course sought to compensate for this lack of practical experience by teacher-controlled, expository, 'formal' methods (A6, B6).

Table 6.11: Application of 'match/mismatch' matrix to Case H

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	College-devised, student resource material - reading exercises, structured notes/handouts, worksheets/ workpacks.	Mature men, aged 30-40, medium ability, highly skilled but requiring further skills training in new techniques with appropriate theoretical backing; employed in mechanical engineering firms.	Mechanical Engineering/Systems Servicing. 'Skill enhancement' in the servicing of ball and roller bearings.	Content organized by topics within general study area.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	College-devised, student resource material - structured notes/handouts and worksheets.	Year I students, 16+, mixed but mainly medium ability; no theoretical knowledge and minimal practical experience.	Basic Engineering Craft Studies in the area of Mechanical Engineering. Basic introduction to key concepts, principles and applications related to the servicing of ball and roller bearings.	Content organized by topics within general study area.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Focus attention on handouts and work-sheets. Discard other resources.	Modify material to compensate for 'mismatch' relating to age, practical/job experience, theoretical knowledge.	Modify material to present essential concepts, principles etc. in more simple terms and in greater detail.	
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D.	Selection of handouts and worksheets. Reading exercises rejected because their content drew substantially on prior practical knowledge.	Handouts and worksheets substant-ially simplified through re-writing and addition of further information, exemplification and learning activities. Some content discarded.	Modifications undertaken with respect to target population also served to compensate for 'mismatch' in level and 'demandingness' of material.	

Table 6.11: Application of 'match/mismatch' matrix to Case H (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A.	To develop a greater understanding of theoretical concepts underlying practical work. To acquire knowledge of new techniques.	Experiential/practical learning in laboratory and workshops; use of films; classroom-based individualized work using work-sheets/work 'packs'; group discussions.	72 hours (12 weeks, 6 hours per day)	Laboratory and workshop facilities. Examples of different bearings.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B.	To acquire necessary basic understanding of key concepts, principles and applications in Basic Engineering Craft Studies as specified for the CGLI (Part I) Certificate.	Small amount of laboratory- and workshop-based sessions featuring teacher demonstration but mostly classroom-based, expository work; use of film and overhead transparencies.	280 hours (35 weeks, 8 hours per day).	Minimal laboratory and workshop facilities. Examples of different bearings.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C.	Modify materials to compensate for the difference in practical and theoretical outcomes.	Modify materials to achieve greater emphasis on expository teaching; decrease emphasis on experiential learning designed to build on practical experience and existing skills.	Expand selected material to compensate for large increase in time allowance.	Decrease demand on laboratory and workshop.
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D.	Modification conducted in relation to D1 and D2; accommodated 'mismatch' in learning outcomes.	Additional, less complex material built into handouts/worksheets (see D2) served to re-orient materials towards more exposition and a greater (basic) theoretical input.	The simplification of material through additional writing, exemplification and learning activities (see D2) and the changes made to the teaching approaches (see D6) served to increase study time.	

The 'mismatch' perceived with respect to the student target population and its reflection in the changes brought about in the teaching approach(es) necessitated changes in the student resource materials. The reading exercises developed for the 'Skills Enhancement' course were discarded as unsuitable because their content assumed substantial previous practical experience; adaptation under these circumstances was not educationally viable. Thus the modifications focused on the handouts and worksheets. These were re-written so as to simplify and expand upon the information therein; additional examples were offered and more learning tasks/activities were incorporated to reinforce the teaching of basic concepts, principles and applications. The provision of additional information and learning activities in the written materials and the 'switch' to (mainly) expository classroom teaching were seen as two ways in which compensation for the shortfall in practical experience might be accommodated.

6. Summary

This case illustrates the nature and direction of adaptation activities involving student resource materials in the context of a skills-based study area. The course framework within which such materials were used was given expression and operationalized primarily through the choice of teaching approach(es)/type(s) of learning activity. Lack of prior experience, basic knowledge and skill on the part of the 'new' student target population resulted in a change in instructional procedures. The combined effects of such changes necessitated corresponding changes in the 'supporting' student resource materials.

It is noted from this case that the nature and direction of the adaptation activities are not defined by the nature of the study content

(in this example, practical/skills-based) but by the characteristics of the material used in the teaching/learning process. Resource material is designed for flexible use in a course framework decided upon by the implementer. It is only with respect to the (i) target population;(ii) subject/study content and (iii) type of learning experience that broad recommendations of use are provided. Consequently, in the case of 'mismatch', it is only along these dimensions that modifications will be necessary.

Case I

1. Background information

This case is concerned with the generation of resource materials which could be made available to students for the purpose of writing graded cross-modular assignments in the BEC (National) programme in Business Studies. The content of the materials to be produced was of an interdisciplinary, problem-oriented nature which drew on study areas represented across the BEC (National) programme. Students were required to make selections from a 'pool' of available resources and analyse the chosen material in terms of a given issue or problem. Their analysis and conclusions were then presented for assessment purposes.

The case is of interest because it marks an attempt to adapt two sets of materials originally developed for higher education courses (undergraduate and postgraduate) for use in FE. Whilst both the higher education courses and the BEC (National) programme in Business Studies had the same vocational orientation, there was substantial

difference in the characteristics of the student target population and academic level of the materials. However, at the time of undertaking the adaptation exercise, the tutor was studying for a part-time Masters degree in Business Administration and it would appear that some of the decisions taken were influenced by his experience on this course.

2. The decision to adopt/adapt

The tutor had become familiar with the broad notion and possibilities of adoption/adaptation as a student on the Masters degree course and was favourably disposed towards using this strategy as a means of generating 'new' materials. He had acquired resource materials from the Masters course which he was keen to adapt for use with his students, and was already involved in another adoption/adaptation exercise in relation to a different course in the college. He therefore had an *a priori* commitment to adoption/adaptation and did not consider *ab initio* development as an alternative strategy.

3. Factors influencing the choice of 'existing' materials

The tutor perceived a need to use materials which were familiar but his only source of information was gained from the materials he had himself used in the Masters course. He did not consider extending the search beyond his own immediate personal experience as a student, and did not investigate further sources of materials either inside or outside the college. The choice of materials for the 'new' development was therefore made from a very limited range of available sources.

4. The appropriateness of 'existing' materials

The Institute of Marketing materials and those produced by his tutors for the MA course were seen as suitable because of their broad study content and their decision-making, problem-solving orientation. Only later, during the course of adaptation, was there some recognition of differences in the student target population, in the academic level of the materials and in the purpose to which the 'new' materials were to be put. The decision to proceed with adaptation was however prompted by a strong commitment to use these particular materials. This seemed to pre-empt any genuine scrutiny in which 'key' features of the 'existing' materials were systematically 'matched' with desired features of the 'new' requirement. Indeed, the specification for the 'new' materials was conceptualized only in the broadest of terms and no attention was given to characteristics of the 'existing' materials such as their nature and form, intended learning outcomes, teaching approach(es)/type(s) of learning experience or teaching time requirement. Thus, decisions were taken purely on intuitive grounds; no basis was established for appraising and acknowledging the extent of possible 'mismatch' and no consideration was given to the feasibility of attempting the adaptation exercise.

5. Adapation decisions and strategies

It is noted from the grid (see pages 223-224) that the modification of the materials focused on the perceived 'mismatch' between characteristics in the student target population and the teaching approach(es)/type(s) of learning experience (D2, D6). Having decided that the Institute of Marketing and the MA materials were generally "too difficult" for the

Table 6.12: Application of 'match/mismatch' matrix to Case I

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Teaching/learning material: case study material from Institute in Marketing ("Upton, Vance and Wells" and "Stones Plastics") involving role-play, reading exercises and written assignments. Student resource material from MA course in Management Principles (University of Hull): case-study material presented as reading exercises and written exercises.	Adult under-graduate equivalent (for Institute of Marketing materials). Adult post-graduate level (for MA in Management Principles).	Business Administration. Integrated content involving aspects of Numeracy/Accountancy, Sociology, Psychology, Law.	Content presented on basis of problems or issues. Recommended sequence.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Student resource to be presented as reading exercises, and work-sheets for the writing of graded cross-modular assignments. BEC (National) Diploma.	18+ years, medium/high ability, roughly 'A' level equivalent.	Business Studies. Integrated content, involving aspects of content drawn from different study areas which inform BEC National programme.	Content to be presented in terms of problems. Sequencing flexible.
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C	Re-organize Institute of Marketing materials to render 'free-standing' for use as student resource material.	Modifications to both sets of materials to accommodate differences between target population (in terms of age, stage of intellectual development, experience, etc.)	Check content to ensure relevance to BEC National programme.	
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D	None recognized.	Materials perceived as "too difficult" for BEC students. Thus: (i) some material discarded; (ii) "more important" elements re-written to simplify language, sentence structure and presentation of ideas; (iii) adapted material 'augmented' and linked by ab initio development.	Some items of content discarded because of references to phenomena and ideas not covered in BEC National programme. Material developed ab initio to link selected items.	

Table 6.12: Application of 'match/mismatch' matrix to Case I (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	List of objectives, some of which concerned the development and application of problem-solving skills in the area of Business Administration.	Experiential learning (through role-play); discussions, written work and learning exercises.	25 hours+ in total.	
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Expressed as a goal concerned with the development of decision-making and problem-solving skills.	Private study in which information items are presented to students for student selection and analysis for the writing of graded assignments.	Flexible (determined by student) but roughly 15 hours.	
THEORETICALLY DESIRABLE ACTIONS/ CHANGES C	Remove content items which do not directly contribute to development of decision-making and problem-solving skills.	Extract from role-playing exercises main ideas, principles, etc. and represent as reading exercises. Incorporate other information items and ideas assumed to arise from discussion work into worksheets.	Reduce length of study time.	
ACTUAL ACTIONS/ CHANGES RECOGNIZED as NECESSARY D	None recognized.	Role-playing exercises substantially adapted through re-writing and incorporated with other information items into reading exercises and worksheets.	No action taken. Assumed that adaptation activities with respect to other key features would serve to reduce study time requirement.	

BEC (National) students, the tutor made a further distinction between those items of study content which were "important" and those which were "less important". If items met the criteria of both "too difficult" and "less important", they were discarded; if they were "difficult" but "important" or "not so difficult" and "important", they were adapted through substantial re-writing (D2). This was to achieve the simplification of the language used to express ideas, the removal of 'technical' words and references to phenomena and concepts unfamiliar to BEC (National) students, and to change some of the exemplification. The 'adapted' components were re-organized for incorporation into reading exercises and worksheets, and co-ordinated and 'augmented' by material developed ab initio.

The role-playing exercises from the Institute of Marketing materials which were intended to present issues and pose problems were analysed in terms of the factual information they offered and the dilemmas they raised. These ideas were then re-presented as a written, expository text, to be used as reading exercises (D6). Similarly, ideas which were to be generated from the discussion topics included in the Institute of Marketing materials were identified and presented through text, in expository style. The 'adapted' material was again 'linked' and 'augmented' by 'new' material developed ab initio.

The actions taken to reduce the 'mismatch' relating to (i) the student target population and (ii) the teaching approach(es)/type(s) of learning experience were intended to reduce the cognitive demands made on the BEC (National) students by the 'new' materials. Such actions also served to compensate for the 'mismatch' relating to (i) the form and nature of the materials and (ii) the teaching time requirement. However, these were unintended (though desirable) consequences of the

actions taken with respect to the student target population and teaching approach because no recognition was given to 'mismatch' in either the form and nature of the materials or in the teaching time requirement (D1, D7).

6. Summary

The case is instructive because it demonstrates a situation in which a strong commitment was developed towards adoption/adaptation as a strategy for curriculum development which was not informed by a knowledge of the principles and processes involved in conducting adaptive work. Whilst the idea of making use of 'existing' materials was an intuitively attractive one, there was no overt recognition of the importance of (i) a clear specification for the materials to be generated; (ii) the importance of a comprehensive and extended search for possible suitable materials for adoption/adaptation purposes; (iii) 'matching' features of the chosen materials with those in the specification and (iv) identifying, in advance, the extent of 'mismatch' and thus the scale of the adaptation exercise.

Given these omissions and oversights, the 'decision' to use the Institute of Marketing and the MA course materials was a 'default' decision or 'non-decision' because no alternative options were considered. Having eliminated any notion of 'choice', the tutor was obliged to devise strategies to overcome the very substantial 'mismatch' relating to the characteristics of the student target population and the purpose to which the 'new' material was to be put. Here, the strategies were essentially those of 'adaptation avoidance' (whereby content items were simply discarded) or 'adaptation minimization' (whereby some re-writing was undertaken but which was supported by ab initio development that

effectively 'by-passed' the requirement to become involved in a much more extensive re-writing exercise). Both 'adaptation avoidance' and 'adaptation minimization ' were 'legitimised' by a rationale which had involved differentiating the study content into 'important', 'less important', 'too difficult' and 'less difficult' categories.

Further 'default' decisions occurred in relation to features where 'mismatch' was in evidence but had not been recognized by the tutor (e.g., see D1, D5 and D6). Here the 'mismatch' was accidentally corrected because of the 'knock-on' effect of conducting modifications with respect to the student target population and the teaching approach(es)/type(s) of learning experience.

It is not known whether the materials were successfully implemented for the purpose for which they were intended. However, the tutor felt the exercise had been too 'time-consuming'. Had rational procedures for decision-making been followed, it is possible that he might have reached this conclusion before undertaking the adaptation exercise.

Case J

1. Background information

The introduction of BEC programmes required college staff to prepare 'new' curriculum/resource materials on the basis of broad educational intentions laid down by BEC. The tutor responsible for the Numeracy and Accounting elements in the college's BEC (General) Diploma had previously taught CSE-level Business Studies in secondary school and had broad familiarity with the general features of school-oriented

materials/texts. He had, however, little previous experience in curriculum development work.

The case features predominantly the 'transfer' of materials originally designed for use in schools into a 'new' FE-based programme. The lessons to be learned from this case however arise in relation to 'key' decision-making points which were not recognized and thus to decisions that were not taken, together with the implications of these oversights.

2. The decision to adopt/adapt

The tutor recognized that he lacked experience and expertise in curriculum development. He perceived ab initio development to be more demanding than adoption/adapation as a means of generating 'new' materials and therefore sought to use 'existing' materials to meet the needs of the BEC (General) Diploma. However, he was essentially looking for materials which could be used directly, i.e., adopted, because he perceived this procedure as placing minimal demands on curriculum expertise. The positive attitude towards adoption was therefore the result of the appraisal of his own ability in curriculum development work.

3. Factors influencing the choice of 'existing' materials

The tutor's knowledge of 'existing' materials was confined to sets of materials/texts which he had previously used in secondary schools and in FE colleges (which was a fairly limited range). No consideration was given to conducting a search for other sources of 'existing' materials either within the college or outside. The choice of 'existing' materials was therefore restricted to materials which were already familiar and

which the tutor had in his possession.

4. The appropriateness of 'existing' materials

The tutor perceived BEC (General) as making roughly the same cognitive demands on students as CSE and RSA, Stage I and considered that the curricular content he had taught on those courses under the 'umbrella' of Commerce and Office Practice would be suitable for the 'new' requirement. Thus, on the broad assumption of rough comparability of 'level' and study content between CSE, RSA Stage I and BEC (General), the tutor decided to adopt material he had previously used on other courses.

The decision that the CSE and RSA materials would be suitable for the 'new' requirement was not taken on the basis of 'matching' these materials with desired features of the 'new' requirement. Indeed, the appropriateness of the materials was decided at a time when 'key' features of the 'new' materials had yet to be defined. Thus, the decision was taken on intuitive grounds, rather than on the basis of any activity which could be described as a 'scrutiny'. It therefore appeared that 'appropriateness' was judged in terms of the reassurance gained from using familiar materials, thus, in terms of characteristics in the tutor, rather than in terms of qualities in the materials themselves.

5. Adaptation decisions and strategies

The grid information (see pages 230-231) reflects the original decision by the tutor not to become involved in adapatation strategies but to rely on the adoption of materials which he already knew and felt comfortable with. This a priori commitment to adoption was offered by

Table 6.13: Application of 'match/mismatch' matrix to Case J

	NAME and TYPE of MATERIAL 1	TARGET POPULATION - Age level - Ability range - Other relevant characteristics 2	SUBJECT/STUDY AREA and its CONTENT 3	ORGANIZATION and SEQUENCING of CONTENT 4
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Learning materials designed for use in CSE-level Business Studies courses in schools and in RSA Stage I in Office Practice.	15+ years, medium/low ability (for CSE materials). 16+, medium ability, post CSE/GCE 'O' level (for RSA, Stage I materials)	Business Studies in areas of Numeracy, Accounting, Office Practice, Law.	Organized in terms of subject/study area. Sequencing in terms of a progression of skills and competences.
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	A priori commitment to adopt CSE and RSA materials for the Numeracy and Accounting elements of a BEC (General) Diploma. After start of adoption/adaptation exercise, however, changed mind and decided instead to produce student resource material consisting of reading exercises and worksheets.	16+, medium ability, post CSE/GCE 'O' level.	Business Studies in area of Numeracy and Accounting. More specifically, Business Calculations, aspects of Office Practice, Book-keeping, etc.	Not specified.
THEORETICALLY DESIRABLE ACTIONS/CHANGES C	Check the impact of 'de-structuring' learning materials so as to render them self-standing items for use as resource materials (e.g., there may be a need to re-write in order to restore coherence).	Increase cognitive demands made on students by increasing complexity of CSE materials.	Discard items of content not relating to designated aspects of Numeracy and Accounting.	
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D	No recognition given to change in status of materials as such but re-writing took place with some 'augmentation' in order to incorporate information items, learning tasks and learning activities into the resource material.	None undertaken.	Rejection of content relating to Law and some aspects of Office Practice.	

Table 6.13: Application of 'match/mismatch' matrix to Case J (continued)

	LEARNING OUTCOMES (GOALS, OBJECTIVES) 5	TEACHING APPROACH(ES)/TYPE(S) of LEARNING EXPERIENCE 6	TEACHING TIME REQUIREMENT and its ORGANIZATION 7	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.) 8
CHARACTERISTICS and CONDITIONS of 'EXISTING' MATERIALS A	Broadly specified in CSE and RSA Stage I syllabuses in terms of abilities and competences to be developed in Business Studies.	Individual, group and classwork involving private study, learning tasks and activities, tutor exposition, role-play, and discussions.	Details not known.	
CHARACTERISTICS and CONDITIONS of 'NEW' REQUIREMENT B	Broadly specified as goals by BEC and concerning the development of abilities and skills in the areas of Numeracy and Accounting for (General) Diploma.	Not specified initially. Following decision after start of adoption/ adaptation activity to produce reading exercises and worksheets, decided upon expository teaching combined with individual work using student resource material.	Not specified.	
THEORETICALLY DESIRABLE ACTIONS/CHANGES C	Identification of possible areas of overlap in specification of learning outcomes.	Incorporate information items and instructions into worksheets. Discard activities such as role-play and discussion work or incorporate information to be acquired thereby into reading exercises.		
ACTUAL ACTIONS/CHANGES RECOGNIZED as NECESSARY D	None undertaken.	Activities and exercises requiring group or class activity discarded.		

the tutor as the reason why decisions about certain 'key' features of the 'new' materials were not taken - e.g., relating to the nature and form of the materials, the precise nature of study content and its organization, the 'translation' of the BEC-specified goals into objectives and the teaching approach(es)/type(s) of learning experience to be offered (B1, B3, B4, B5 and B6). The tutor suggested that there was no reason why the nature of these 'decisions' might not legitimately be determined by the features of the chosen 'existing' materials. It was not possible to tell whether this explanation and its rationale were developed in the face of a 'default' decision or provided the grounds for a genuine decision.

Nonetheless, the tutor changed his mind about the wisdom of adhering rigidly to a commitment to adoption when a colleague pointed out to him that some students on the BEC (General) Diploma course might actually have used these CSE and/or RSA materials in school and, even if they had not, would probably be disheartened to discover that they had not progressed beyond CSE-level work, even though they had left school and 'gone on to college'. Thus, on motivational grounds, the tutor decided to adapt the 'existing' materials into reading exercises and worksheets (B1). This involved some re-writing and re-organization of information items, the addition of instructions and also the addition of further learning tasks and activities (D1). Thus, some modification to the 'original' materials was undertaken, supported by some 'augmentation', though by 'default' rather than as a planned activity.

6. Summary

This case traces the implications of deciding, on intuitive grounds, that a rough comparability, in terms of level and study content, exists

between a 'new' programme and a course (or courses) previously taught. This assumption precluded a search for materials which lay outside the tutor's personal experience and strengthened the a priori commitment to the use of adoption as a means of responding to the 'new' requirement. It also provided a rationale for 'bypassing' decisions about 'key' features of the materials to be produced.

The change of mind about the direct use of the CSE and RSA materials and the decision to produce, instead, worksheets and reading exercises had implications for the choice of teaching approach(es)/type(s) of learning activity. Earlier, the tutor had been content to go along with the instructional procedures recommended/suggested in the design of the 'existing' (learning) materials. However, the decision to develop student resource materials implied individual (as opposed to co-operative) group or class work and, as a consequence, study content to be acquired through, e.g., role-play or discussions, was discarded.

The case therefore demonstrates the influence which perceptions and assumptions, held by the curriculum developer prior to the start of the adoption/adaptation activity, may powerfully shape - and limit - the range of possible options at each 'key' phase of the decision-making process. It also illustrates the causal relationships which exist between different features of curriculum materials and the 'knock-on' effects which occur when modifications are carried out to one or more of these features.

Section 6.2: Conclusions

As the introduction to this chapter made clear, it is not the intention in this final section to draw any extended conclusions from the analysis of the individual cases of adoption/adaptation presented here. This is because the purpose of the following chapter is to present an overview of the case-study material and to conduct a comparative analysis across all the cases which, as far as is possible, will allow more general statements to be made about the nature of adoption/adaptation decision-making and its associated procedures. However, notwithstanding this intention, a number of comments may be made at this point which do not pre-empt the appraisal and further analyses offered in the next chapter.

The most striking feature of the decision-making in the individual cases is its very complex nature. Each significant decision-making point testifies to the presence and influence of a number of identifiable variables which interact to shape the nature of the decision and the direction of its associated action(s). Moreover, all decisions and related actions are themselves causally connected and intimately interrelated. The highlighting of particularly significant, interesting and instructive aspects of individual cases pointed up two broad categories into which such variables may be grouped, viz.,

(i) those which exist prior to the commencement of any adoption/adaptation activity and which may be further subdivided into (a) qualities residing in the curriculum developer(s); (b) characteristics inherent in the institutional context in which the adoption/adaptation is conducted;

(ii) those which feature the conduct of the adoption/adaptation task per se, and are associated with (a) the characteristics of

the 'original' materials and (b) the nature of their relationship to the 'new' requirement.

Chapter 3 drew attention to those features implied in (i) above, viz.,

- the attitude of the curriculum developer towards adoption/adaptation (and towards ab initio development)
- his/her knowledge of 'existing' materials
- his/her experience and expertise in curriculum development work
- his/her channels of access to 'existing' materials

and the individual cases bore witness to the extent to which the nature of these 'pre-conditions' defines the parameters of the adoption/adaptation activity, and acts to limit or extend the range of options at each decision-making point. For example, in Case F, each of the 'pre-conditions' was favourably weighted: a positive attitude towards adoption/adaptation, informed by its advantages as a strategy for curriculum development; extensive and in-depth knowledge of 'existing' materials; substantial experience and expertise in curriculum development matters and ready access to a variety of 'existing' materials. As a consequence, a comprehensive range of possible options presented itself at each 'key' point in the decision-making process viz., at the 'scrutiny', 'selection', 'further scrutiny and matching' and 'mismatch identification' phases. This enabled the curriculum developers to exercise a full degree of control over the nature of decision-making and the direction of adaptation activity.

In contrast, in Case I, the 'pre-conditions' were unfavourable. The curriculum developer had no prior experience in curriculum development and lacked confidence in his own ability. He had no knowledge of 'existing' materials outside his own personal experience and did not consider investigating alternative sources of material. His options became restricted to a single set of materials with which he was familiar

and, from that point, 'decisions' were powerfully and overly influenced by the characteristics of these 'existing' materials. Under such circumstances, he was unable to exercise the necessary control over the adaptation activity and all subsequent 'decisions' concerned the identification of 'coping strategies' to confront the imperatives of the situation in which he found himself.

The curriculum developer in Case I, however, was by no means alone in the problems which he encountered. Indeed, the majority of curriculum developers featured in the case-study material experienced difficulties of a similar kind. The lack of control over the nature and direction of the adaptive work was a recurrent and persistent feature of most of the cases and one which is explainable in terms of failing to satisfy the 'pre-conditions' of adaptive work.

The 'pre-condition' which played a particular significant role in relation to Case I, and cases which exhibit similar features, was the absence of curriculum experience and expertise. Many curriculum developers had not, prior to initiating the adaptive work, identified with any clarity their intentions with respect to the materials to be developed. Consequently, the adaptive work lacked rigour and direction and the characteristic features of the 'existing' materials exercised undue and excessive influence on the nature of the 'new' product.

The significant number of decisions by 'default' which featured in the case-study material indicated that many developers failed to recognize that adaptive decision-making is indeed complex and that they needed to work through the various decision-making issues and activities which are inherent to adaptive work. Certainly, in listing reasons why adoption/adaptation had been used to generate 'new' materials and in

enumerating the perceived advantages offered by adaptive work over ab initio development, curriculum developers invariably conveyed the idea that adaptive work made fewer demands than ab initio development. This attitude throws some possible light on why curriculum developers failed to understand or acknowledge in practice that adaptive work, as a strategy for curriculum development, inevitably and necessarily shares with ab initio development certain fundamental and essential principles, e.g., the need for a clear identification and articulation of educational intentions. With respect to these basic tenets, adaptive work clearly makes the same demands as that of ab initio development.

Chapter 3 also drew attention to those sets of variables implied in (ii) above, viz., those which feature the conduct of the adoption/adaptation task per se. Here it was suggested that curriculum/resource material may be described and analysed in terms of the features of their design (referred to as 'curricular features') and in terms of the conditions envisaged for their implementation (referred to as 'contextual features'). The grid information presented in each case study sought to portray these features/conditions, both in relation to the 'existing' materials chosen for adoption/adaptation and in relation to the 'new' requirement. It also sought to trace the 'cross-relationships' which exist between the different features/conditions of a given set of materials and thus the 'knock-on' effects of modifying one or more of these variables to accommodate perceived 'mismatch'.

The grid information was presented under eight categories, six of which were characteristics of the materials themselves whilst the remaining two were conditions for their implementation. In tracing the 'cross-relationships' which existed between these different features, two points became apparent:

(i) individual characteristics of the materials themselves exert differential amounts of influence on other features - and these amounts increase correspondingly with the degree of 'mismatch' involved;

(ii) conditions of implementation arise as a consequence of the design features of the materials and therefore have a 'supportive' and 'facilitating' status.

Both points have implications for the conduct of adaptation activities.

Firstly, in considering individual characteristics of the materials themselves, it is clear that when materials are generated for a target group which has different characteristics from those for which the 'existing' materials were originally developed, modifications undertaken to accommodate this 'mismatch' are likely to occur along a number of other dimensions, e.g., in relation to learning outcomes, subject/study content and teaching approach(es)/type(s) of learning activity - and consequent change in the conditions of use (see Case F). Similarly, changes in the nature of the subject/study content may precipitate changes in its organization and sequencing. This will occur, for instance, when a concern to teach the 'key' concepts of a particular science subject according to a hierarchical ordering is replaced by a concern to pursue a problem-oriented inquiry which crosses the 'traditional' boundaries separating different science subjects. (A concern for this type of issue is demonstrated in Cases F and G.)

Finally, to cite another example of 'cross-relationships', a change in the nature/type of material can have far-reaching consequences for a wide range of characteristics/conditions. Case G demonstrated that the adaptation of teaching/learning materials into student resource materials required a 'de-structuring' of the materials in such a way that their

separate components could be used in a course 'framework' decided upon by the teacher, and that this necessitated changes in the organization of the study content and in the teaching approach(es)/type(s) of learning activity. When, later, those student resource materials were further adapted into learning materials for home-based study, the content had to be re-structured, re-organized and sequenced so as to re-introduce intellectual coherence into an intentionally 'self-standing' 'product' which could be used without teacher mediation. This, in turn, implied changes in the teaching approach(es)/type(s) of learning activity.

There was, however, evidence of a general lack of appreciation, on the part of a number of curriculum developers, of the existence of 'cross-relationships' and of their implications for adaptive work. In situations where a consideration is given to the features of the 'new' materials, these 'cross-relationships' are recognized and duly reflected in the specification. Similarly, those 'knock-on' effects which arise when one or more features in a set of materials is/are changed to remedy 'mismatch', are anticipated and taken into account when there is a good understanding of the principles of curriculum design. Unfortunately, in the majority of cases, the centrality of these 'cross-relationships' was not recognized at any planning stage of the adaptive work. Curriculum developers tended, instead, to become conscious of their influence once involved in the conduct of the adaptive work per se. Consequently, much of the adaptation activity was directed towards reacting to, and coping with the impact of the 'knock-on' effects which became manifest during the activities undertaken to remedy 'mismatch'.

Finally, there was further evidence of a reluctance, on the part of curriculum developers, to confront the complexity of decision-making by the prevalence of what has been referred to as 'adaptation avoidance' and 'adaptation minimization'. Curriculum developers, as noted above, often showed themselves willing to generate materials which, for convenience's sake, had 'imported' many of the characteristics of the 'existing' materials chosen for the work. Indeed, on the comparatively rare occasions when a specification for the 'new' requirement had been established in advance, this specification was sometimes changed so as to obviate the need to conduct adaptive work, or at least to reduce its scale and extent.

Chapter 7 which follows necessarily makes some reference to the points made here in this concluding section and incorporates them in its more extended and comprehensive overview of the case-study material.

CHAPTER 7: IN-DEPTH ANALYSIS OF CASE-STUDY MATERIAL (II)

Section 7.0: Introduction

In Chapter 6, the analysis of case-study material relating to adoption/adaptation attempts employed an essentially idiographic approach. In this, the 'interconnectedness' of decisions and associated activities within individual cases was traced, and observations about the significant, interesting and note-worthy features of each case were made. In this chapter, therefore, it is sensible to examine the case-study material as a whole, and to identify any general patterns which may exist across the cases with respect to characteristic features of adoption/adaptation decision-making and the strategies most in evidence in this type of work.

The approach which is used for the purposes of this comparative analysis parallels that used for Chapter 6. Therefore, the same questions are addressed to the case-study material and the information/findings relating to each is presented under the same headings. For convenience's sake, these questions are repeated here, as follows:

1. How, and under what circumstances, was the decision to adopt/adapt arrived at?
2. What factors influenced the choice of the curriculum/resource materials used for the adoption/adaptation work?
3. What criteria were used for judging the appropriateness of these materials?
4. What were the various conditions to be met/satisfied by the 'new' materials?

5. What characteristics could be associated with the curriculum/resource materials chosen for the work?
6. What actions/changes would theoretically have been desirable?
7. What were the actual actions/changes that were recognized as necessary, and which were 'bypassed' or circumvented in some way so as to remove potential 'mismatch'?
8. What, in brief, were the main adaptation activities actually undertaken?

These questions lend themselves to the following broad issues which are used as headings for the main sub-sections of this chapter, viz.,

1. The decision to adopt/adapt
2. Factors influencing the choice of 'existing' materials
3. The appropriateness of 'existing' materials
4. Adaptation decisions
5. Adaptation strategies.

Section 7.1: The decision to adopt/adapt

The examination of the case-study material suggests that the decision to use 'existing' material to meet a 'new' requirement may be arrived at in a number of different ways:

1. Appraisal of the advantages (and disadvantages) of adoption/adptation against those of *ab initio* development.
2. Identification of one, or at most, two advantages of adoption/adaptation, with no serious consideration of *ab initio* development.
3. *A priori* commitment, made on intuitive grounds.
4. Persuasion by another person/agency not to attempt *ab initio* development.
5. Desire to use a particular set (or sets) of material with which

the curriculum developer is already familiar.

6. An imposed requirement from an 'external' body/agency.

Only 1. above illustrates what may be termed as a 'systematic' approach to decision-making on this issue and this approach is described and extensively discussed in Chapter 3. However, only Case G comes somewhat near to engaging in a process of this kind and thereby confirming the approach. Here the curriculum developer perceived advantages of adoption/adaptation over ab initio development in terms of characteristics of the strategy per se and in terms of his own situation, viz.,

(i) the saving of time;

(ii) his own knowledge of a range of possible materials for adoption/adaptation purposes;

(iii) his ready access to these materials;

(iv) the fact that these materials were of high quality and had an established good reputation.

In the main, however, curriculum developers who made a conscious decision to engage in adoption/adaptation did so on the basis of considering a more narrow range of advantages. Here the most-cited advantages were (again) (i) savings in time; (ii) the fact that, compared with ab initio development, adoption/adaptation made lighter demands on curriculum expertise; (iii) the fact that an abundance of curriculum/resource material was available for possible use (see e.g., Cases A, C and F). Finally, there was one case where the curriculum developer gave no consideration to ab initio development but was unable to identify his reasons for 'choosing' adoption/adaptation (Case I) - hence the notion of 'intuitive choice' (see 4. above).

The cases identified above made the decision to adopt/adapt on grounds which varied from the systematic to the intuitive. Nevertheless, these

curriculum developers may be distinguished from those who found themselves involved in what may properly be defined as adoption/adaptation, not because they had knowingly chosen this as a strategy but because an a priori commitment had been made to use a particular set (or sets) of curriculum/resource materials to meet the 'new' requirement (see, e.g., Cases D and E). In such cases, it is incorrect to state that a 'decision' was made to adopt/adapt because the adoption/adaptation attempt was staged, in a sense, by 'default'. It therefore appeared that practitioners of adoption/adaptation had come to use this strategy by means of one of two possible routes:

(i) through previous exposure to the notion of adoption/adaptation and its broad principles, and/or through its previous use;

(ii) because they had confidence in a particular set or sets of curriculum/resource materials which were perceived as having effectively met some previous course/curriculum requirement.

Only one curriculum developer (in Case I) had been 'formally' inducted (through a Masters programme) into the idea that curriculum adoption/adaptation was an alternative strategy to ab initio development as a means of generating 'new' materials - although one of the underlying assumptions of the adoption/adaptation exercise described as Case F was that the recipients of the 'adopted'/'adapted' materials (teachers in FE colleges) would be acquainted with the idea of using 'existing' materials for a new course. Other curriculum developers who had deliberately chosen adoption/adaptation, however, had acquired knowledge of the strategy through collaborative work with a colleague who possessed this 'formal' knowledge (as in Case G) or by abstracting its principles for themselves through previous practice (as in Case C).

Section 7.2: Factors influencing the choice of 'existing' materials

In almost all cases, the consideration of 'existing' materials for the 'new' requirement was initiated against the context of the curriculum developer's own immediate personal experience. The initial concern was to reflect upon or, in a few cases, to consult, materials which were already familiar, and these tended to be materials already in the curriculum developer's possession or in locations to which he/she had easy access. Choosing materials, the characteristics and qualities of which were already known, appeared to be a source of reassurance for curriculum developers who recognized their own lack of curriculum experience and expertise (e.g., Cases I and J), whilst for others it was an attractive proposition because it avoided the necessity of extending the search elsewhere (e.g., see Case H).

Familiarity with a particular set (or sets) of materials was, to a large extent, a function of practitioners' previous teaching experience and constituted 'informal' knowledge acquired by dint of professional circumstances and career patterns (as opposed to 'formal' and deliberate exposure through, e.g., staff development programmes). FE tutors who had previously taught in schools (as in Cases C, E, F, G and J) were in a position to 'import' school-oriented materials into the sector. Similarly, tutors who had had direct (Case I) or indirect (Case A) exposure to materials from Higher Education were able to bring this familiarity to bear on their decision-making. However, in the case of the tutor who had spent all his teaching career in the FE sector (see Case H), there was no attempt to look beyond FE materials which he had previously used.

In the majority of cases, familiarity with particular materials acted as the most salient criterion of 'choice' for the adoption/adaptation attempt. Indeed, as already noted, for Case E, the commitment to a set of familiar and favoured materials provided by 'default' the 'route' into an adoption/adaptation attempt. A similar situation occurred in Case H, and with Phase II of the adaptation attempt in Case G. However, when familiarity was limited to one or two sets of materials (Cases I and J), severe constraints were placed on the 'choice' of 'existing' material, to the point that 'choice', in any real sense, ceased to exist. In other cases, on the other hand, familiarity extended to a very wide range of curriculum/resource materials (Cases F and G) and provided adequate opportunity for informed decision-making.

The search for possible sources of 'existing' materials was rarely widened beyond the curriculum developer's immediate experience. In the two cases where there was some recognition that this experience was limited and that this might be counter-productive to the success of the adoption/adaptation attempt (Cases A and B), the scale of the search was only marginally widened to include an inspection of materials held in the college library. No consideration was given to the possible use of directories, inventories, 'profiles' or other possible sources of information about 'existing' materials - either in these or in any of the other cases analysed. Only in one case was an extensive and systematic search carried out for materials (Case C). This was encouraged and facilitated by a purpose-built resource bank, established by a funded FE project in the area in which the college was located.

Although shortage of time was offered most frequently as the reason for not conducting a more extensive search, it appeared that, in general,

the importance of a comprehensive search as a core activity of any adoption/adaptation attempt, was not fully appreciated. The analysis of the case-study material demonstrates unequivocally the consequences of restricting options at this particular phase of the exercise: Cases A, B, D, I and J, in particular, testify to the implications of 'choices' which were narrowed to but one source of materials. In these cases (as noted in Chapter 6), subsequent decisions and related actions were so often a function of having selected materials which later came to be perceived as inappropriate for the task in hand, to the extent that 'coping' strategies had to be developed - such as changing significant aspects of the specification for the 'new' course/programme - as a means of coming to terms with difficulties which might otherwise have been avoided.

Section 7.3: Appropriateness of 'existing' materials

In the majority of cases (i.e., 7 out of the 10 analysed), curriculum developers judged the appropriateness of the 'existing' materials according to a single criterion - that of rough comparability of subject/study content with that required in the 'new' course/programme. In three cases out of the seven (viz., Cases A, B and H), consideration had been given, prior to the commencement of the adoption/adaptation attempt, to the broad nature of the subject/study content which was to feature in the 'new' course, and this enabled a 'matching' with the 'existing' material chosen for consideration. However, in the other four cases (viz., Cases D, E, I and J), a different situation presented itself.

In Case E, there was evidence that the strong a priori commitment to the use of a particular set of resource materials for the 'new' course had been allowed to influence the design of the course itself and,

correspondingly, the nature of the 'new' materials to be developed. In this situation, the 'matching' of a specification for 'new' materials to the characteristics/conditions of 'existing' materials did not take place; neither may any criterion of appropriateness be properly identified. Similarly, 'decisions' which appeared to have been taken in Cases I and J did not, in reality, occur. The 'decision' about the nature of the study content was taken after the start of the adoption/adaptation exercise and was dominated by a concern to accept and incorporate as many features of the 'existing' materials as possible into the 'new' materials to be developed. Finally, the curriculum developer in Case D, labouring under the severe constraints of a contrived curriculum need in an ill-defined study area and forced into a requirement to use certain materials, was unable to define the desired study content with any clarity. In this case too, therefore, it does not make sense to discuss a 'criterion of appropriateness'.

In all seven cases, it appeared that the judgement about the appropriateness of the 'existing' materials was reached after only a cursory examination of these materials. In Case A, B and H, this examination was used to 'match' the broad subject/study content of the materials against that which was to feature in the materials for the 'new' course. In Cases D, E, I and J, however, the brief scrutiny was used as a source of inspiration for 'decisions' about the subject/study content (and any other features as yet undetermined for the 'new' course/programme).

Yet in the remaining three cases (Cases C, F and G) there was evidence of a far more reflective approach to the appraisal of 'appropriateness'. Case G identified the

(i) characteristics of the target population;

(ii) subject/study content;

(iii) learning outcomes;

(iv) teaching approach(es)/type(s) of learning activity

as significant design features of curriculum materials and systematically checked for 'match' (and 'mismatch') in order to judge how suitable the materials were. Case F displayed a similarly rational approach to this issue and used the

(i) characteristics of the target population;

(ii) subject/study content;

(iii) organization and sequencing of subject matter;

(iv) learning outcomes;

(v) teaching approach(es)/type(s) of learning activity

as features for comparative purposes.

The conditions under which judgements about appropriateness were made in Case C were rather different from those pertaining in Cases F and G. In Case C, many of the decisions which a curriculum developer undertaking adoption/adaptation would expect to make had already been made by staff working for the (regional) FE project . For instance, the materials were specially developed for the target group of students which the tutor who featured in Case C was to teach,and the planning and design of these materials had been guided by a specification of learning outcomes and desired teaching approach(es)/type(s) of learning activity. Nevertheless, the tutor wished to have at her disposal materials which were finely tuned to the needs of individual students. To achieve this, she conducted an extensive scrutiny of the materials and, with details to hand of each student's characteristics, systematically checked the materials for 'match' (and 'mismatch').

Notwithstanding the careful and informed manner in which the judgement about appropriateness was reached in Cases C, F and G, the evidence pointed strongly to the conclusion that, in general, decision-making about the suitability of 'existing' material for adoption/adaptation attempts failed to reflect an acknowledgement of the importance of analysing and evaluating 'existing' material in a serious and detailed way. Moreover, the notion of organizing this appraisal against a 'reference' of clearly identified features/conditions relating to the 'new' requirement, was either misunderstood or inadequately conceptualized.

Section 7.4: Adaptation decisions

Having identified a set (or sets) of materials (whether advisedly or by 'default') for the adoption/adaptation attempt, curriculum developers arrived at the point in the exercise where decisions had to be made about how the materials were to be used in the 'new' course/programme. At this stage, all curriculum developers featuring in the case-study material recognized that this involved some kind of action in which the characteristics of the chosen materials were 'matched' with the various conditions to be satisfied by the 'new' course. However, in the majority of cases, only two or three features were considered. These were usually

(i) the characteristics of the target population;

(ii) the subject/study area; and sometimes,

(iii) the nature of the materials.

Only infrequently was a wider range of characteristics/conditions given any consideration. Significantly, only in three cases (Cases E, F and G) was attention directed in any purposive way to a comparison of learning outcomes (viz., goals and objectives).

The range of features considered in the 'matching' activity was closely related to the degree to which conditions for the 'new' requirement were clarified at the start of the adoption/adaptation attempt. In Cases F and G, attention was given, e.g., to the details of the desired

(i) learning outcomes;

(ii) subject/study content;

(iii) characteristics of the target population;

(iv) teaching approach(es)/type(s) of learning activity;

(v) organization and sequencing.

This specification was brought to bear at the decision-points relating to the choice of 'existing' materials and their appropriateness, and used to advantage during the 'matching' activity. In the majority of cases, though, details about the 'new' materials were established (either at the start of the adoption/adaptation exercise or at some point during the exercise itself) with respect to a more limited range of features, thus restricting the number of features which presented themselves at the 'matching' stage.

It seems fair to assume that had curriculum developers given attention to the full range of characterisitcs/conditions which needed to be considered in relation to the 'new' materials, this would have been reflected in the way in which they conducted the 'matching' activity. The fact that, in the main, only two, or, at most, three features were typically considered indicates that it was only these features which had, in any way, been attended to before the adaptive work was initiated. The conclusions to be drawn therefore were that adaptive work was mostly undertaken before any real thought had been given to the conditions/requirements to be satisfied by the 'new' materials and that curriculum developers needed to give serious consideration to clarifying, defining and articulating educational intentions with respect

to the 'new' development before embarking on work of this kind.

In those cases where the check for 'match'/'mismatch' was conducted in relation to a small number of features, a necessarily incomplete and sometimes inaccurate picture of the nature of the 'mismatch' and the direction of necessary modifications was obtained (see, e.g., Cases A, B, I and J). In Case A, for instance, the original intention to produce learning materials had to be abandoned when the size of the adaptation task later became apparent. In Case I, no 'matching' was carried out in relation to

(i) the nature and type of materials;

(ii) learning outcomes;

(iii) teaching time requirement.

Consequently, 'mismatch' along these dimensions was not recognized, although it in fact existed. Thus no actions were taken to accommodate the change from teaching/learning material to student resource material, or to discard items of content irrelevant or inappropriate to the stated learning outcome, or to reduce the study time required (although this latter was remedied by 'default'). It therefore seems highly probable that there were weaknesses in the 'adapted' materials.

In Chapter 3, a discussion was offered concerning the way in which the nature of the adoption/adaptation task varies according to the nature of the 'existing' material. This is an important characteristic of adaptive curriculum work and one which was well illustrated in the case-study material. However, this aspect merits close consideration because its significance was frequently not recognized by the curriculum developers.

Taking an overview of the type of material which was chosen for the adoption/adaptation, it is noted that, in three cases (Cases A, D and J), these were learning materials and, in a further four cases (Cases B, F, G and I), these were teaching/learning materials. As Chapter 3 emphasised, both these types of material are designed in a way which does not afford very much flexibility of use, either because conditions for their implementation are overtly stipulated or because a certain 'pattern' of usage is implied in the presentation and organization of subject/study content, learning activities, etc. The materials chosen for adoption/adaptation purposes with respect to these seven cases may be described as 'structured' because they have been generated within a framework identified by the 'original' curriculum developer and all features/conditions associated with these materials both reflect the underlying philosophy of that framework and are logically interrelated. In contrast, the remaining cases (Cases C, E and H) used student resource material as their source of 'existing' material. These materials allow the curriculum user a greater degree of discretion relating to their implementation; they do not impose a course framework but rather assume that this is a task to be undertaken by the user. In this sense, they may be described as 'flexible'. The implications of using structured and flexible materials respectively for the adoption/adaptation exercise will now be explored with reference to examples of each in the case-study material.

The tutor in Case G demonstrated, through the modification activities he undertook, an awareness of the implications of adapting structured materials. Here the 'existing' materials, in the adaptation from teaching/learning to student resource, were appraised in terms of a wide range of characteristics/conditions and 'mismatch' was specifically identified with respect to the type and form of the materials. The

action taken to modify the materials included the conscious 'de-structuring' of these materials into separate components/elements and, through subsequent activity aimed at co-ordinating these elements within a 'new' course framework which he (the tutor) had developed. Later, when the need arose, once more, to generate learning materials, the activity was directed towards re-assembling and 're-structuring' the resource materials to achieve a 'free-standing', intellectually coherent 'package' for home-based study purposes.

In general, however, the idea that 'existing' materials may have qualities which necessarily define them as structured because their characteristics/conditions of use are 'fixed' by the 'original' curriculum developers, thus rendering them non-negotiable, was not fully appreciated or acted upon. Whilst the tutors in Cases A, B, D, I and J encountered a range of difficulties (mostly unforeseen by them) in modifying the chosen materials, these difficulties were usually perceived in terms of 'mismatch' regarding characteristics of the target population and subject/study content. Whilst this assessment of the locus of 'mismatch' was, in all cases, not incorrect, it was essentially incomplete. Thus, although actions taken to remedy 'mismatch' with respect to these other categories sometimes had the effect of overcoming 'mismatch' with respect to the type of material as well, this occurred by 'default' and not as a result of planned intervention.

Cases C, E and H illustrate the adaptation of student resource materials which have qualities describable as flexible. In these cases, the materials could be broadly defined only with respect to a few features (e.g., the target population and the subject/study area and its content) whilst decisions relating to the majority of features/conditions were intentionally left to the discretion of the curriculum user. This

meant that during the scrutiny and analysis of the resource material, the tutor could not make pronouncements about characteristics/conditions such as the learning outcomes, teaching approach(es)/type(s) of learning experience and organization and sequencing of subject matter. For this reason, these categories could not be affected by the adaptation task. Because this effectively reduces the scale of the adaptation task, this may be seen as an attraction by curriculum developers. Indeed, this flexibility was a feature of the 'Science in Society' materials recognized by the tutor in Case E and constituted one of the main reasons for the selection of this particular set of materials.

The conclusion to be drawn from the above discussion is that curriculum developers need to be aware, when choosing sets of materials for adoption/adaptation, of the degree of structure which they exhibit. They also need to recognize that these qualities have implications for the locus and extent of modification tasks and that different 'patterns' of activity result from the adoption/adaptation of structured and flexible materials respectively. It should be borne in mind that, as a general rule, the greater the degree of specification with respect to the various characteristics/conditions of the 'existing' materials, the greater the degree of structure and correspondingly, the greater the number of categories which will need to be 'matched' in relation to the adaptation task. Conversely, a low degree of specification increases the flexibility of the materials and reduces the number of categories which will need to be 'matched'. The experiences of most of the curriculum developers featured in the case-study material illustrate the consequences of not recognizing these principles. Many of the problems encountered in the adaptation attempts arose because there was a failure to understand the 'interconnectedness' of the

different characteristics/features in a set of structured materials and to be aware of the fact that action undertaken to correct 'mismatch' in two or three areas is bound to necessitate action with respect to all remaining areas.

The above discussion of differences between types of curriculum material and resource material has drawn attention to the fact that, in the main, curriculum developers did not consider the full range of characteristics/conditions of 'existing' material when checking for 'mismatch'. It has also been noted that what is arguably the most important feature of any (structured) set of materials - the statement of intended learning outcomes - was not a feature to which great significance was attached (it was in evidence in only three out of the ten cases in people's decision-making). Instead, as a general rule, curriculum developers attached most importance to the characteristics of the target population and, to a somewhat lesser extent, to the subject/study area and its content. Consequently, these two features tended to be the focus of change.

Case A demonstrates a fairly typical 'pattern' of adaptation activity to be identified with the majority of cases. Here the predominant concern was with 'mismatch' in relation to the target population which resulted in changes being made to the subject/study area and its content (predominantly to cope with the intellectual 'demandingness' of the material). These modifications necessitated further changes with respect to the type of material, the learning outcomes and the teaching approach(es)/type(s) of learning experience. Other remaining features/conditions which were affected by modifications conducted elsewhere were, however, not given any attention. In other cases, there was a similar preoccupation to accommodate 'mismatch' with respect

to the target population by modifying the subject/study area content which precipitated further corrective action in those features most closely associated with these two categories. However, in the case of flexible materials (see Cases C, E and H), the 'knock-on' effects of change along one dimension were less far-reaching and limited to fewer features because of the low degree of 'interconnectedness' which existed between them.

The emergence of the characteristics of the target population as the focus for concern in adoption/adaptation work may be explained in terms of its particular features, viz., the target population is a 'fixed' or 'given' factor in all curriculum planning and does not invite negotiation, either with respect to 'existing' materials chosen for adoption/adaptation work or with respect to the 'new' materials to be developed. Thus, whilst there were examples in the case-study material of features of the 'original' specification being changed to accommodate 'mismatch', this could not sensibly include a change to the characteristics of the target population. The target population may therefore be considered as the 'starting point' across the case-studies for modification activities and may, for present purposes, act as a 'reference' for describing and analysing different adaptation 'patterns'.

Section 7.5: Adaptation strategies

It is noted from the case-study material that, in all cases, differences between the characteristics of the target population (in the 'existing' materials and those to be developed) might be categorized in terms of

(i) age level and/or

(ii) ability range and/or

(iii) other relevant characteristics.

Thus Case A featured an adaptation of materials for

(i) a high ability group to a medium/high ability group;

(ii) an adult group to a 16+, school-leavers group;

(iii) an Honours degree level group to a Year I, TEC group;

(iv) a general education group to a vocationally-committed group.

These four 'transfer' patterns necessitated modifications as follows:

(i) Reduction of cognitive demands on students.

(ii) Deletion or modification of aspects of subject/study content of a specialist nature.

(iii) Deletion of aspects of subject/study content and learning activities which assume greater prior experience and expertise.

(iv) Modification or 'augmentation' of subject/study content to increase the vocational relevance of materials.

However, other 'transfers' evident in the case-study material have different 'bases'. For instance:

(i) higher education → further education (Cases A, D, I)

(ii) general education → further education (Case F)

(iii) general education → vocational preparation (Case B)

(iv) general education → vocational education (Cases E, G, J)

(v) further education → further education (Cases C and H)

or, using the teaching approach(es)/type(s) of learning experience as a 'base', some examples are:

(i) experiential/practical → expository (Cases F, H)

(ii) group work → one-to-one/tutor-student work (Case C)

(iii) discussion work → private study (Case I)

(iv) guided discovery → self-instruction (Case G)

(v) home-based study → classroom-based work (Case A)

or, again, using the type of material as a base:

(i) learning → teacher resource + student resource (Case A)

(ii) student resource → student resource (Case E)

(iii) teaching/learning → teacher resource (Case B)

(iv) teaching/learning → student resource (Cases G and I)

(v) student resource → student learning (Case G)

(vi) teaching/learning → teaching/learning (Case F)

(vii) learning + student resource → teacher development (Case D).

Indeed, a very large number of 'transfers' involving different 'bases' is discernable from just ten cases of adoption/adaptation work. It is however clear that subsumed within any 'transfer' are possible modifications to several characteristics/conditions featuring in the grid and that there are 'knock-on' effects of these modifications on other categories, particularly in the case of structured materials.

The problem of 'mismatch', either actual or anticipated, was tackled in two main ways by the curriculum developers in the various cases featured here. In the first instance, the majority sought to identify strategies for either avoiding adaptation altogether or at least minimizing its scale. Then, following on from the deployment of 'adaptation avoidance' or 'adaptation minimization' strategies, further activity was undertaken to remedy any 'mismatch' which still remained. Considering firstly 'adaptation avoidance/minimization', the case-study material reveals that this was achieved in a number of different ways, viz.,

(i) At the stage of deciding upon characteristics/conditions of the 'new' requirement, specifying only a few such features and subsequently allowing certain features/conditions of the 'existing' materials chosen for the adoption/adaptation attempt to define and shape those remaining features (Cases D, I, J).

(ii) At the 'selection' stage of the adoption/adaptation attempt (a)

choosing flexible materials whose characteristics could more easily be 'moulded' to meet the requirements of the new course/programme (Case E); (b) choosing from a wider range of possible suitable materials, a smaller number which demonstrated optimum compatibility with the requirements of the 'new' course/programme (Cases C and F).

(iii) During the process of adaptation per se, changing the details of the specification for the 'new' requirement (Cases A and B).

(iv) Once an adoption/adaptation attempt had taken place, seeking to find alternative uses for the 'adopted'/'adapted' product in situations perceived as roughly comparable (Cases G and H).

Thus, whilst these strategies demonstrate different types of relationship between the 'existing' materials and those to be developed, with the exception of (ii) above, it was the 'existing' materials which were allowed to exert a major force on the 'desired' materials and this resulted in varying degrees of distortion with respect to 'original' intentions.

Further activity undertaken to correct any additional areas of 'mismatch' which might remain also demonstrated a concern not to become involved in extensive adaptation activity. Material was used 'directly' as often as possible, viz., 'adopted' and where this was not possible, modifications were carried out mainly by re-writing the text, or by deleting the more unsuitable parts and substituting with ab initio developed material. Ab initio development also tended to be used as a 'bridging' device to link/co-ordinate separate content items or to correct deficiencies/irrelevancies in the 'existing' materials. In general, because recognition was not given to the differences between sets of materials (viz., structured and flexible), all curriculum materials used

for adoption/adaptation work were treated as though they were resource materials, i.e. they were used in piecemeal fashion, re assembled and linked with other units/items culled from other sources in what amounted to an essentially eclectic manner. Hence, the 'adapted' product was typically arrived at through an admixture of adoption adaptation and ab initio development.

The figure overleaf (Figure 7.1) demonstrates this admixture of approaches to bring about modifications. It is not possible, however, to generalise about these strategies: they are therefore presented without discussion as examples of possible ways in which 'mismatch' may be accommodated.

Section 7.6: Conclusions

The analysis of the ten cases of adoption/adaptation work demonstrates that whilst the notion of generating 'new' materials by modifying (where necessary) 'existing' curriculum/resource materials is an attractive one at a 'common sense' level, its principles have been arrived at through pragmatism, rather than through a theoretical understanding of what is involved. With a few notable exceptions, there appeared to be little awareness of the need to accord adoption/adaptation the status of a 'curriculum development strategy', and thus an inadequate recognition of the necessity to think through and apply the same principles as underpin ab initio development, viz.,

(i) the articulation and operationalization of educational intentions;

(ii) the translation of these intentions into appropriate learning and teaching programmes (to include the generation of course and learning materials).

Table 7.1: Examples of strategies/processes used to bring about modifications to 'existing' curriculum materials

Action to be undertaken	Strategy/process
1. Adoption through careful selection/ rejection of subject matter (to illustrate applications, not concepts).	Use of adaptation deliberately avoided. Where content is rejected, deficit made good via adoption of 'other' material and/or 'ab initio' development.
2. Introduction of teaching methods to focus on experientialism, self-instruction and student-control over learning outcomes.	Re-presentation of information as student activity rather than set text; use of visits; directed private study involving own research, use of libraries, etc.
3. Elaboration and extension of adopted materials to make up for perceived deficiencies in the materials.	Adoptions from 'other' sources, and/or development by teacher and/or students of material 'ab initio'.
4. Reduction in number of themes treated.	Selection/rejection of subject content. Selected content than re-organised (through re-writing and addition of link material developed 'ab initio').
5. Change from discovery-based, experiential methods to (largely) self-instruction.	Re-writing of material and its re-presentation in a more structured form. Development of additional material 'ab initio' for purpose of home-based study (viz., multiple choice questions, model answers, explanations, notes of guidance, set reading, instruction for conduct of small amount of practical work).
6. Reduction in the amount of practical work.	Change the context of learning from college to home and replace experimental work with written expository text (adopted from 'other' sources or developed 'ab initio').
7. Change learning activities to make greater cognitive demands on students.	Re-write experiments and written exercises to make more difficult. Often involved some 'ab initio' development.
8. Increase number of self-assessed questions.	Supplement existing adapted material with material adopted from 'other' sources or by 'ab initio' development.
9. Replace out-moded material.	Reject some material and replace by material adopted from 'other' sources or by 'ab initio' development.
10. Use more difficult aspects of material as teacher resource.	Can be called adoption 'by default'. Strategy used to avoid adaptation viz. change original specification for student resource materials to teacher resource materials.
11. Simplify and shorten material.	Cut down on length of sentences and replace specialised words with every-day words. Re-write partially.
12. Change from self-instruction to teacher-controlled instruction (to include group activity).	Adopt aspects of material for use as student resource under direction of teacher; remove instructions to students to be found in body of self-instructional texts; remove self-assessed questions also in text and use as discussion starters for groups or for written assignments.
13. Increase relevance of materials	Supplement materials with 'other' adopted material and/or by 'ab initio' development.

Moreover (again with one or two exceptions), there was little evidence that adoption/adaptation was seen to have its own particular decision-making points with respect to the generation of 'new' materials and that there are certain activities which need to be clearly identified in relation to these decision-points.

Because the theoretical principles underlying adoption/adaptation work were not fully comprehended or simply overlooked, the importance of the decision-making points (where their existence was acknowledged) was often underestimated. Many of the cases bear witness to a number of weaknesses of approach, viz.,

(i) An inadequate or incomplete 'specification' for the 'new' materials to be developed.

(ii) A decision to adopt/adapt which was more often shaped by a desire to use a particular set of materials or to cope with constraints and exigencies operating at institutional level.

(iii) The small number of characteristics/conditions featuring in the 'existing' materials which were considered when the choice of materials was being made.

(iv) The acceptance of 'appropriateness' based on a similarly narrowed range of considerations.

(v) The lack of understanding about the 'interconnectedness' of different features of the curriculum design and about the implications of this 'interconnectedness' with respect to different types of material (structured and flexible).

(vi) The preoccupation with 'adaption avoidance/minimization', often at the expense of distorting the 'original' specification.

Some cases demonstrate this full spectrum of weaknesses. This is explainable because the decisions to be made during the

adoption/adaptation work are themselves causally interconnected so that a decision made at an early point of the exercise (e.g., a decision about the features of the 'new' requirement or a decision about the choice of materials) will affect and necessarily 'shape' subsequent decisions (e.g., with respect to the nature and direction of the modification activity). Many of the cases show, for instance, that the specification for the 'new' requirement was only partially articulated, often in terms of merely two or three characteristics/conditions, and that this then 'fixed' the range of variables which were compared at the 'scrutiny' stage and had a similarly pre-determining effect on those areas that were checked for 'mismatch'. In such situations, a 'chain' reaction was set up in which choices were always unnecessarily narrowed at each key decision-making point, thus rendering the decision, at best, less circumspect than it might have been and, at worst, incorrect and ill-advised.

The case-study material also effectively illustrates a spectrum of different relationships which were established between the 'existing' materials on the one hand, and those desired for the 'new' course/programme on the other. The optimum relationship (from the point of view of the quality of the decision taken) is clearly one which is established through full perception and understanding of what is to be used and how it is to be used. This implies a systematic identification of characteristics/conditions along both dimensions and a similarly systematic checking for 'match' and 'mismatch'. In this way, a clear idea is established of the locus and direction of the modification activity and the curriculum developer retains full control over all aspects of decision-making and its associated activities. Under these circumstances, the product of adaptation is likely to be compatible with original intentions.

So often, however, there was a lack of clarity with respect to educational intentions and, as a general rule, adaptive work was initiated from a position where the requirements for the 'new' curriculum/programme were ill-defined and inadequately articulated. Decisions were taken on a flimsy information base and a suitable 'tension' between the imperatives of the 'existing' material and those of the 'desired' material, was not maintained. This resulted in occasions when the characteristics/conditions of the 'existing' material dominated 'decisions' and activities relating to the generation of the 'new' material so that the 'adopted'/'adapted' product reflected many of these characteristics. Under these circumstances, the suitability of the product for the 'new' course/programme becomes questionable.

The analysis of the case-study material highlights not only the interrelationships which exist between the various decisions to be taken during an adoption/adaptation attempt but also those interrelationships which exist, within a given set of materials, between individual characteristics/conditions (such as those which are identified in the grid). Although it was noted that materials may be categorized according to their location on a structured - flexible continuum, all materials, even flexible materials such as student resource, have characteristics (e.g., target population and broad study content) defined by the 'original' curriculum developer which are logically and conceptually interconnected. Therefore, modifications made to one or more of these defined features are likely to necessitate changes to all or many of those remaining defined features. When the 'existing' materials demonstrate a high degree of structure, the number of characteristics/features which may require modification will increase accordingly.

An understanding of the principles underlying the design of a given set of materials and an ability to analyse material according to the degree of 'interconnectedness' present in its characteristics/conditions was often not in evidence in the case-study material. Consequently, once a particular set (or sets) of material was chosen for the adoption/adaptation task, curriculum developers experienced difficulty with a number of unforeseen problems which were a direct consequence of the interconnections in the material. Had a greater awareness existed of these issues, it would have been possible to consider whether, in fact, it was feasible to continue with the adaptation task. In reality, however, the question of feasibility was never addressed. Once a decision had been made to use a particular set of materials, curriculum developers struggled to overcome the problems in the most expedient way by mobilising 'adaptation avoidance/minimization' strategies.

It was noted that, in only one case, (Case I) had the curriculum developer been exposed to the theoretical principles which underpin the use of adoption/adaptation as a strategy for curriculum development. For the majority therefore, these principles were, to a greater or lesser extent, acquired through experience. However, two cases (Cases F and G) illustrate that experiential learning may be an effective approach to adoption/adaptation work if and when the learning is conducted within appropriate parameters. These are

(i) a positive attitude towards adoption/adaptation;

(ii) an extensive knowledge of 'existing' materials;

(iii) access to such materials (coupled with their availability);

(iv) experience and expertise in curriculum development work in general.

In Cases F and G, these 'boundary conditions' were in evidence and

provided the necessary facilitative framework which allowed the acquisition, through pragmatism, of the principles of adoption/adaptation work. Moreover, these conditions offered the opportunity for a reflective approach to the adoption/adaptation task which encouraged the identification of a range of possible options at each decision-making point and thus a more rational basis for the decisions taken. However, in all the remaining cases, conditions were not as favourable and the lack of curriculum development expertise, in particular, militated against an appropriately reflective approach to the experience of involvement in adoption/adaptation work.

CHAPTER 8: OBSERVATIONS, GENERAL CONCLUSIONS AND RECOMMENDATIONS

A great deal has been written in the past thirty years on the topic of curriculum development. The curriculum movement of the 1960s and 1970s which introduced substantial changes in the educational content and instructional approaches of teaching and learning in schools, gave rise to numerous publications which documented the various rationales for curriculum innovation, its underlying philosophies, its impact in different subject/study areas and its effects on the experiences of teachers and pupils. Moreover, in the existing literature much attention has been given to the nature and principles of curriculum theory and to a concern to disseminate a body of knowledge about the essential features and procedures relating to 'key' aspects of the innovation process, particularly the identification and articulation of educational needs, the development of appropriate teaching/learning materials to meet these needs, and the use of such materials in the classroom setting.

The major assumption implicitly underlying many publications addressing issues of this type is that curriculum development is largely synonymous with what has been referred to in this study as 'ab initio' development, i.e., with the notion that decision-making and associated activity in the field of curriculum development is centrally concerned with the generation of 'new' curriculum or resource materials 'from scratch'. In the context of the 1960s and 1970s, this perception of the nature of curriculum development is wholly understandable and acceptable. Indeed, the most 'visible' and widely-recognized achievement of the curriculum movement was the establishment of a large number of curriculum projects that produced a wealth of high

quality teaching/learning materials through ab initio development.

A firm belief underlying this study is that curriculum development work now, in the 1980s, cannot and should not ignore the legacy of the curriculum movement. In particular, current curriculum activity has to recognize that

(i) there are lessons to be learnt from the experiences of innovation in the school sector which have 'transfer' value, irrespective of the nature and conditions of the educational setting in which innovation is being contemplated;

(ii) there are, in existence today, many excellent curriculum and resource materials which can, after suitable modification, effectively serve a wide spectrum of 'new' educational needs.

The issue raised in (i) above has already been the subject of a study referred to several times in Chapter 1 of this thesis (FEU, 1982); the issue raised in (ii) has provided much of the rationale for the conduct of the study reported here.

It seems sensible to acknowledge that, once developed, curriculum or resource materials may be used for alternative educational purposes through the process of curriculum adoption or adaptation. In practice, curriculum adoption or adaptation offer considerable advantages, at least potentially so. They can lead to economies in relation to time, money and human effort; in intellectual terms, they are likely to be less demanding on curriculum development experience and expertise in general, and on planning and design skills in particular. To put it simply, the use of adoption/adaptation as a means of generating 'new' materials may well avoid the 're-invention of the wheel'.

It has been argued in this study that curriculum developers, working in the 1980s, have, in adaptive curriculum activity, a strategy for curriculum development that provides an alternative to ab initio development. This is not to suggest that it is always appropriate for all curriculum development initiatives, or to insist on its exclusive use. As Chapter 3 demonstrated, the decision relating to the most suitable strategy for a given set of circumstances needs to be carefully appraised against a recognition of (i) the opportunities and constraints operating on the curriculum development work (ii) the characteristics and conditions relating to the materials to be developed and those same features in the 'existing' materials being considered for use. Moreover, as Chapter 6 showed, in practice adaptive curriculum development and ab initio development may often be used together, in a complementary sense.

The major premise of this study, however, is that adoption/adaptation as a strategy for curriculum development has great potential for, and is well suited to the conditions that have prevailed in the Further Education sector during the past decade and that still prevail today, for the following reasons:

(i) Pressures from many directions to respond to 'new' and urgent educational needs in many aspects of its former 'traditional' work and to take on board responsibility for provision in numerous fast-growing areas that initially were outside the professional experience of its staff,

(ii) The absence of large well-financed bodies of equivalent size and scope as the Nuffield Foundation and the Schools Council of the 1960s and 1970s to develop, to the same extent, curricular skills to produce purpose-built packages of high quality, trialled and 'field-tested' materials, and to train

staff within institutions in the planning, design and implementation of materials.

(iii) The expectation that FE staff, within their own institutions can design courses, develop materials and continue to teach against a context of little time and sometimes little adequate preparation/training for the many curriculum development tasks which need attending to.

Under such circumstances, the case for adoption/adaptation, given its advantages, would appear obvious and incontestable.

However, as little was known about adoption/adaptation work or its use in the FE context, the investigation undertaken for this study aimed to realize the following intentions:

(i) to 'map' the incidence of adaptive curriculum work as a strategy for curriculum development;

(ii) to gain an understanding of the conditions, issues, decisions, procedures and activities to be associated with this type of work;

(iii) to develop some broad guidelines and recommendations for practitioners in order to facilitate the conduct of such work.

In this sense, the conception of the study and its intended outcomes was underpinned by essentially practical motives: the use of adoption/adaptation work was considered to be a valuable 'route' to the generation of 'new' course/programme materials and it was important to provide information (assuming that this did not already exist) about how such work might best be carried out.

As a first step in the investigation, a review of relevant literature was conducted. The findings from this were as follows:

(i) Accounts which discussed adoption/adaptation activities were

mainly in connection with the phenomenon of 'cultural transplantation'. These concerned the specific issues and problems of 'importing' curriculum project materials, mostly in the area of secondary school science, and implementing such materials in different countries and different cultural settings.

(ii) Accounts of adoption/adaptation activities which had been staged outside the 'cultural transplantation' framework provided no theoretical analysis of the nature and characteristic features of such activity as a strategy for curriculum development.

(iii) There was only one account of the staging of adaptive work within the FE sector and the writer reported unfavourable results, following an evaluation of this work. Again, this was a descriptive account of a single attempt to adopt curriculum materials which lacked any kind of theoretical underpinning.

The disappointing findings from the literature review accorded particular importance to the need to stage empirical work in the FE sector to establish a body of information relating to the issues under investigation. This was conducted in two parts. Part I sought to establish, by means of questionnaires and follow-up inquiries, the incidence and general nature of adaptive work. This was carried out at two different points in time - during 1980/81 and in 1985. Part II concerned the development of case-study material of a detailed kind which could provide information of a precise nature about the essential nature of adaptive work, about decision-making which typically characterizes this work and about the actual processes involved in using 'existing' materials to generate 'new' materials. This information

was collected by means of in-depth structured interviews with practitioners in FE who had been involved in adaptive work. To carry out both aspects of the empirical investigation, a theoretical model, based on rational principles of decision-making, was developed. This provided a framework for the collection of information and for its subsequent analysis and evaluation.

A number of methodological difficulties were encountered in the conduct of the field-work. These were as follows:

(i) The author of this study had little control over the identification of the target population to receive the 1980/81 questionnaire and no control over its distribution. Respondents (college principals) had to define the curricular activities of their staff according to a given set of criteria for determining 'adoption' and 'adaptation'. This task was problematic per se, but particularly so, with hindsight, when it was recognized that curriculum adoption/adaptation often did not feature, as a recognized strategy, in practitioners' understanding of 'curriculum development'.

(ii) The attempt, in 1985, to avoid similar definitional and conceptual problems resulted in the necessity of using two questionnaires, one which sought information about curriculum development in general and one which asked specifically about the use of 'existing' materials in such work. This resulted in the generation of large amounts of data which were not all directly relevant to the issues under consideration. This necessitated a great deal of 'sifting' and sorting in order to isolate instances of genuine adaptive work.

(iii) The development of the case-study material had to be

organized through the collection of information by in-depth structured interviews which required practitioners to accurately recall the details of their decision-making and activities, and to provide information about why they had made particular decisions and taken particular actions. A number of reported instances of adaptive work which, on paper, appeared to be potentially fruitful, could not be developed into case-study material because the interviewees could not 're-construct' with any clarity, their reasoning and their actions retrospectively. At the time, it appeared that this was due to faulty memory but the insights gained from the investigation of the practice of adaptive work later confirmed that the reported attempts at adaptive work had frequently lacked the guidance and direction provided by genuine reflection on the nature of the issues involved.

Notwithstanding these problems, the empirical investigation into the incidence of adoption/adaptation work in FE produced findings in 1980/81 which were reaffirmed in 1985. Moreover, ten informative and representative cases of adoption/adaptation attempts were identified which provided information of a sufficiently detailed kind to allow conclusions to be drawn about the nature, decisions, issues and procedures which characterize such work.[1] Based on the data reported in Chapters 5, 6 and 7, a number of observations and conclusions may usefully be highlighted.

(i) The incidence of adaptive curriculum work in FE is low. Only one college in five attempted work of this kind, despite the very extensive involvement in curriculum development activities evidenced in the 1985 survey. In the main, the

notion of 'curriculum development' was found to be closely associated in people's minds with ab initio development and there was little exploration of the potential of adaptive work as an alternative strategy.

(ii) Those practitioners who had used 'existing' materials to meet 'new' course/programme needs reached such a decision by means of pragmatic considerations, rather than by reasoned choice between adoption/adaptation and ab initio development. The pressure to generate 'new' materials frequently forced tutors in colleges to use their own immediate experience as their sole resource, turning to materials which they had used previously for other purposes, and with which they were familiar. There was little recognition of the need to extend their existing knowledge by consciously embarking on a search for alternative sources of material. Tutors in FE whose professional experience had brought them into contact with influences from outside the sector sometimes had some knowledge of materials from, e.g., the school sector or from Higher Education. In such cases, the search for alternative materials was even less apparent than among colleagues who had tutored only in FE.

(iii) Curriculum adoption/adaptation was not, in practitioners' thinking, accorded the status of a curriculum development strategy. This may account, in part at any rate, for a failure to recognize that (a) adaptive work shares, and should share, some of the characteristics of ab initio development and (b) it also has its own characteristic

features. As for any type of curriculum development, educational intentions need to be clarified before embarking on the development work per se. In the case of adaptive work, the curriculum developer should be able to conceptualize the nature and direction which any modification needs to take, and be able to weigh up the advantages and disadvantages of the necessary procedures against those required in ab initio development. In the main, there was little indication that adaptive work was perceived as a necessarily systematic endeavour, predicated upon rational and clear-headed principles of decision-making. Rather, it was seen as a panacea for beleaguered and inexperienced curriculum developers, a route which held out the promise of offering materials for 'new' courses/programmes with the minimum of effort, both in practical and academic terms. Thus, the choice of adaptive curriculum development was often a function of its image as a 'soft option', rather than as a reputable strategy for curriculum development, the attraction of which lies in the recognition but legitimate 'short-circuiting' of decisions which are common to all curriculum development attempts.

(iv) Because adoption/adaptation was, in practice, not seen as a rational system of decision-making, it frequently lacked the guidance of a clear conceptualization of what it involves. As a consequence, some curriculum developers' experience of this type of work was not a wholly happy one. A number of attempts was initiated in the absence of any specification for the materials to be developed. This tended to result in the characteristics and conditions of use envisaged for the

'existing' materials strongly influencing the nature of the 'new' materials which were developed. Under such circumstances, it is impossible for the curriculum developer to exercise appropriate control over the nature and characteristics of the 'new' materials. It is also highly questionable whether the 'product' proves to be suitable at implementation level. In situations where there was some general idea about the characteristics of the materials to be developed, the specification was frequently changed when the nature and scale of the necessary modifications later became apparent (usually during the process of adaptation per se). Under these conditions, efforts were directed into strategies of 'adaptation avoidance' or 'adaptation minimization', rather than the confrontation and resolution of 'mismatch'.

(v) Many of the practitioners who, either advisedly or by 'default', used adaptive work for curriculum development demonstrated a lack of understanding of the principles of curriculum design. In particular, they were unaware of the interrelationships which exist between individual curricular features (viz., characteristics of the target population, learning outcomes, subject/study matter and its organization, teaching approach(es)/type(s) of learning experience) and between curricular features and contextual features (i.e., conditions which relate to the use of curriculum materials - time and its organization, resource implications, etc.). Thus, the 'knock-on' effects of the modification of one or more curricular features on other (curricular or contextual) features was frequently not anticipated and sometimes not

even noticed.

Although the analysis and evaluation of attempts at adaptive curriculum development in FE demonstrated weaknesses and shortcomings, it should be noted that many of the practitioners lacked skill and experience in curriculum development generally and that in only two instances had any form of 'in-service', staff development work relating to curriculum matters, been available. It should also be noted that although the experience of many curriculum developers who had tried adaptive work was somewhat discouraging from the analyst's point of view, a number of practitioners expressed satisfaction with their efforts and indeed, in two cases where the pre-conditions were favourable and where decision-making was systematically conducted, the quality of the decision-making was commendable. However, in order to compensate in some way for the lack of guidance which available literature offers the practitioner of adaptive curriculum development and in an attempt to render the conduct of such work less problematic, a number of recommendations, based on the decision-making framework presented in Chapter 3 of this study, is offered. (The flow-chart, Figure 3.1, which represented this framework, is reproduced as a reference and aid in Appendix C.)

1. Curriculum adoption/adaptation should be seen as a logical, systematic process of decision-making that
   (i) is predicated upon the satisfactory fulfillment of a number of important pre-conditions (see 2. below);
   (ii) involves a number of critical decision-making points (see 3. below).

   This perception of the nature of adaptive work needs to underlie and inform all aspects of practitioners' activity in this area of

endeavour.

2. The essential pre-conditions for adoption/adaptation are:

   (i) a clear identification of educational intentions with respect to the materials that are to be developed. This identification is fundamental to all curriculum development work and, in the case of adoption/adaptation, should shape and guide all decisions and related actions.

   (ii) knowledge of a range of 'existing' materials. Here 'range' is used advisedly. If personal experience relating to this issue is limited, knowledge may be increased by reference to 'profiles', directories and similar compilations which document and describe curriculum and resource materials produced by others. Alternatively, direct access to samples, 'packages', etc., of materials through libraries and resource banks should be arranged.

   (iii) the establishment of loan/access facilities which ensure the ready availability of 'existing' materials for the duration of the adaptive work.

   Curriculum adoption/adaptation can realistically be contemplated only when the three pre-conditions have been met. Once such pre-conditions have been established, the curriculum developer is in a position to work through the sequence of decision-points outlined in 3. below.

3. The critical decision-making points occur with respect to

   (i) the appropriate strategy for conducting the development work, i.e., by using adoption, or adaptation, or, where neither is practicable, ab initio development.

   (ii) the suitability of 'existing' materials for use ('direct' or after

modification) in the 'new' curriculum/programme;

(iii) the identification of 'mismatch' (where relevant) between the chosen 'existing' materials and those to be developed;

(iv) the identification of actions/strategies to remedy this 'mismatch';

(v) the feasibility of carrying out the required modifications.

Issues (i) to (v) above give rise to four important decisions, viz.,

- the 'strategy' decision (i above)
- the 'suitability' decision (ii above)
- the 'modification' decision (iii and iv above)
- the 'feasibility' decision (v above).

However, the curriculum developer should recognize that these decisions are interdependent and that it is not always necessary to take all four decisions. In the case of adoption, only the 'strategy' and 'suitability' decisions are taken. Where the preconditions for adoption/adaptation are not met, only the 'strategy' decision (in favour of ab initio development) is taken. Only when adaptation is being contemplated as the strategy for curriculum development do all four decisions need to be worked through.

4. The establishment of the necessary pre-conditions for adaptive work should be followed by the systematic appraisal and analysis of 'existing' material so that judgements may be made about

(i) their suitability for use, with or without modifications;

(ii) the feasibility of carrying out these modifications, where necessary.

This appraisal and analysis may usefully be conducted in terms of a number of 'key' curricular/contextual features, viz.,

- type and nature of material
- target population

- subject/study area and its content
- learning outcomes
- teaching approach(es)/type(s) of learning experience
- teaching time requirement and its organization
- resource requirements.

The analysis is applied both to the 'existing' materials being considered for adoption/adaptation and to the 'desired' materials, viz., those to be developed. In order to facilitate this analysis, a 'match/mismatch' matrix, such as the one presented in Chapter 3, may be used (Appendix C provides a copy of this matrix for practitioners' use).

5. Where 'mismatch' is noted, activities and procedures undertaken to accommodate this should ensure that the educational intentions underlying the adaptive work are not compromised or distorted. An awareness of the interrelationships which exist within and between the design features of the materials should be sustained so that the 'knock-on' effects of change to any of the curricular or contextual features may be anticipated and effectively remedied.

6. A good understanding of the opportunities and constraints operating at institutional level will facilitate decision-making in those areas where value judgements inevitably have a role to play (e.g., with respect to the feasibility of carrying out the modifications that seem necessary). In all other areas of decision-making, every attempt needs to be made to ensure that it is rationally and systematically conducted.

It is hoped that these recommendations will be useful to practitioners who may wish to consider adoption/adaptation work as a strategy for

curriculum development. The analysis of the ten case-studies presented in Chapters 6 and 7 of this study certainly provides validity for such a scheme. However, the propositions put forward in this study should be seen as an area for further investigation and evaluation in the practice of adaptive curriculum work. For this reason, practitioners are urged to follow the guidance offered here, to implement the proposals and to appraise to what extent the recommendations are useful, practicable and effective in meeting their curriculum development requirements.

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APPENDICES

APPENDIX A

Curriculum Projects Referred to in Chapter 1

Further details of the projects listed below may be obtained from Schools Council Project Profiles and Index (160 Great Portland Street, London W1N 6LL) and the Mathematical Association's Guide to Mathematics Projects in British Secondary Schools (259 London Road, Leicester). Another useful source of information is Stenhouse, L. (ed) (1980) Curriculum Research and Development in Action, London, Heinemann.

Design and Craft Education

Director	Professor S J Eggleston
Location	University of Leicester and subsequently University of Keele, Department of Education
Duration	1967-1973
Designated population	Pupils, aged 13-16+
Financed by	Schools Council
Publishers	Edward Arnold Ltd., Maidenhead

Ford Teaching Project

Director	J Elliott
Location	University of East Anglia, Centre for Applied Research in Education and subsequently Cambridge Institute of Education
Duration	1972-1974 (main project); 1974-1975

	(extension)
Designated population	Qualified teachers
Financed by	Ford Foundation
Publishers	Not applicable (working papers only)

Humanities Curriculum Project

Director	L A Stenhouse
Location	Philippa Fawcett College of Education and subsequently University of East Anglia, Centre for Applied Research in Education
Duration	1967-1972
Designated population	Pupils, aged 14-16+
Financed by	Schools Council and Nuffield Foundation
Publishers	Heinemann, London.

Geography 14-18

Directors	Dr G Hickman (until July 1973); J Reynolds (August 1973 - August 1974); H Tolly (September 1974-1975)
Location	University of Bristol, School of Education
Duration	1970-1975
Designated population	Pupils, aged 14-18
Financed by	Schools Council
Publishers	Macmillan, Basingstoke

Geography for the Young School Leaver

Directors	R A Beddis and T H Dalton (until 1974); T Higginbottom
Location	Avery Hill College of Education
Duration	1970-1979
Designated population	Pupils, aged 14-16
Financed by	Schools Council
Publishers	Thomas Nelson, Sunbury-on-Thames

Modular Courses in Technology

Co-ordinators	R L Page and J T Poole
Location	University of Bath, School of Education (Science and Technology Centre)
Duration	1976-1978
Designated population	Pupils, aged 14-16
Financed by	Schools Council
Publishers	Information obtainable from R L Page, University of Bath

North West Regional Curriculum Development Project

Director	Dr W G A Rudd
Location	University of Manchester, School of Education
Duration	1967-1972
Designated population	Pupils, aged 13-16+

Financed by	Schools Councils and LEAs
Publishers	Blackie, Glasgow; Holmes McDougall, Edinburgh; Macmillan, Basingstoke

Nuffield Working with Science*

Director	K Wild
Location	University of Keele, Department of Education
Duration	1974-1977
Designated population	Pupils, aged 16-18
Financed by	Nuffield Foundation
Publishers	Longman, York

*(Re-published as Nuffield Working with Science: Source Materials for CPVE, 1987)

Shropshire Mathematics Experiment

Director	R S Heritage
Location	71 Sandbach Road North, Alsager, Stoke-on-Trent
Duration	1964-1970
Designated population	Pupils, aged 11+
Financed by	Shropshire LEA
Publishers	Penguin Books Ltd, Harmondsworth

APPENDIX B.1

Questionnaire used in the 1980/81 Survey

QUESTIONNAIRE

1. Are any departments in your college involved in adaptation work as defined in the Newsletter? Yes/No

   (If 'Yes', please complete the rest of the questionnaire.
   If 'No' but there is an intention to undertake such work in the future please proceed to Question 4.
   If 'No' and there are no further plans, please sign and forward as a nil return.)

2. If adaptation work has been completed or is in progress

   a) has it entailed mainly

      i. the direct transfer and incorporation of curricular materials, ie. ADOPTION? Yes/No

      ii. the transfer and incorporation following substantial modification of curricular materials, ie. ADAPTATION? Yes/No

   b) was the work carried out mainly by an individual or a team? Individual/Team

      If by a team, did this involve inter-college collaboration? Yes/No

3. If adaptation work has been completed or is in progress

   a) are the materials available? Yes/No

   b) could examples be made available to the Project? Yes/No

   c) would someone be prepared to talk to a member of the Project team about your experience of ADOPTION or ADAPTATION? Yes/No

      If yes, please name .....

4. If so far, you have not been involved in ADOPTION or ADAPTATION but are planning such work

   a) in what subject/study area/course will this take place?

   b) what is the target population?

Please return to:

Mrs G Heathcote
Department of Education
University of Keele
Keele
Staffs ST5 5BG

Name of Respondent: .....
Status: .....
Institution and Address: .....
.....
.....
.....

APPENDIX B.2

Questionnaire (Number 1) used in the 1985 Survey

CURRICULUM DEVELOPMENT WORK IN

FURTHER EDUCATION

NAME _____ POSITION IN COLLEGE _____

Please tick the appropriate box in relation to questions 1,2, and 6 below.

1. Is curriculum development work currently being undertaken at your college?

YES ☐
NO ☐

2. Has curriculum development work been undertaken during the past two years?

YES ☐
NO ☐

(If you have replied 'NO' to both these questions, you have no need to proceed further but please return this form to the address below.)

3. With which course(s) or programme(s) is/was the curriculum development connected?

4. In which faculty(ies)/department(s)/section(s) of the college is/was the work undertaken?

5. Please identify by name, status and location the member(s) of staff involved with the development work who could, if necessary, be contacted for further information.

Name	Faculty/Department
(i)	
(ii)	
(iii)	

6. To your knowledge, are/were curriculum materials already in existence used in the development work?

YES	☐
NO	☐
NOT KNOWN	☐

Thank you for your assistance in this matter.

Please return this form to the following addressee and address:

Gaye Heathcote
Department of Education
University of Keele
Keele
STaffs ST5 5BG

APPENDIX B.3

Questionnaire (Number 2) used in the 1985 Survey

CURRICULUM ADOPTION AND CURRICULUM ADAPTATION

AS STRATEGIES FOR CURRICULUM DEVELOPMENT

NAME _____ POSITION IN COLLEGE _____

ADDRESS OF COLLEGE _____

_____

_____

_____

TELEPHONE NO. _____

Please tick the appropriate box in relation to questions 2,3,5,7,8,10,12 and 14 below and supply as much detail as possible with respect to the open-ended questions.

1. For what course(s)/programme(s) has curriculum development work been carried out?

2. What was the form of the materials produced?

Learning materials

Resource materials

3. By whom were the materials used?

Students

Staff

Both

4. Which materials were drawn upon in the development work?

5. To what extent did the "source" materials require modification/amendment?

Little or no change

Moderate change

Substantial change

6. If "moderate" or "substantial", what was the nature of the changes made?

7. Could the modified materials be "viewed" if necessary?

Yes

No

8. Have the modifications proved successful?

Yes entirely

Moderately so

Problems encountered

9. If problems were encountered, please specify.

10. How was the development work undertaken and organized?

By an individual

By several individuals working collaboratively

By a "special" course team

11. If more than one person was involved, how was the work divided up and allocated?

12. Were you personally involved in the development work?

Yes

No

13. If 'No', could you please provide the name(s) of the member(s) of staff who were involved (assuming he/she/they are still at the College).

14. Would it be possible to visit the College to discuss?

Yes

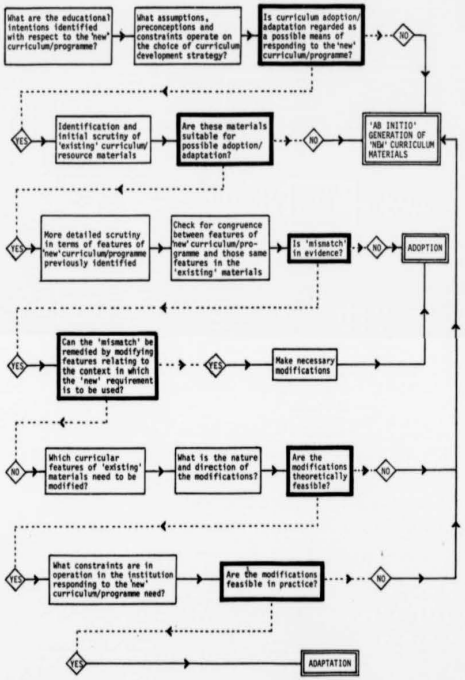
No

THANK YOU FOR FILLING IN THIS QUESTIONNAIRE

Please return the completed form to me, in the enclosed stamped addressed envelope, as soon as possible.

APPENDIX C

Decision-Making Framework Relating to the Curriculum Development Strategy


What are the educational intentions identified with respect to the 'new' curriculum/programme?
What assumptions, preconceptions and constraints operate on the choice of curriculum development strategy?
Is curriculum adoption/adaptation regarded as a possible means of responding to the 'new' curriculum/programme?
NO
YES
Identification and initial scrutiny of 'existing' curriculum/resource materials
Are these materials suitable for possible adoption/adaptation?
NO
'AB INITIO' GENERATION OF 'NEW' CURRICULUM MATERIALS
YES
More detailed scrutiny in terms of features of 'new' curriculum/programme previously identified
Check for congruence between features of 'new' curriculum/programme and those same features in the 'existing' materials
Is 'mismatch' in evidence?
NO
ADOPTION
YES
Can the 'mismatch' be remedied by modifying features relating to the context in which the 'new' requirement is to be used?
YES
Make necessary modifications
NO
Which curricular features of 'existing' materials need to be modified?
What is the nature and direction of the modifications?
Are the modifications theoretically feasible?
NO
YES
What constraints are in operation in the institution responding to the 'new' curriculum/programme need?
Are the modifications feasible in practice?
NO
YES
ADAPTATION

APPENDIX D

Copy of 'Match/Mismatch' Matrix

	NAME AND TYPE OF MATERIAL	TARGET POPULATION - Age level - Ability range - Other relevant characteristics	SUBJECT/STUDY AREA AND ITS CONTENT	ORGANIZATION AND SEQUENCING OF CONTENT	LEARNING OUTCOMES (goals, objectives)	TEACHING APPROACH(ES) /TYPE(S) of LEARNING EXPERIENCE	TEACHING TIME REQUIREMENT AND ITS ORGANIZATION	RESOURCE REQUIREMENTS (technical, secretarial, physical space, materials, facilities, etc.)
CHARACTERISTICS AND CONDITIONS OF 'EXISTING' MATERIALS								
CHARACTERISTICS AND CONDITIONS OF 'NEW' REQUIREMENT								
OBSERVATIONS ON 'MATCH/MISMATCH' AND ACTION TO BE TAKEN (WHERE NECESSARY)								